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**JOURNAL**

**OKLAHOMA STATE MEDICAL ASSOCIATION**

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The

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## Convalescing . . . but still a long way to go. Anxiety can make it even longer.

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Convalescence following medical or surgical procedures may be almost endless to an anxious patient. And, indeed, anxiety with some patients actually retards progress—for example, by inducing insomnia and reducing cooperation.

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**Indications:** For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

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**Important Precautions:** Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

**Side Effects** include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions,

observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

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## *Rubella on Way Out Conquest of the '70's*

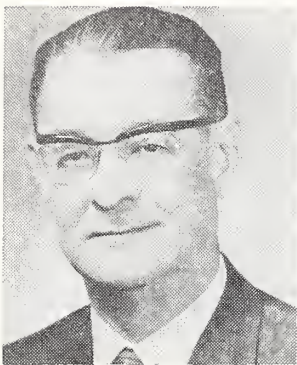
DURING RECENT years the immunologists of this country have developed a method of preventing Rubella which involved the development of a vaccine. It is to be used primarily in children, one through 11 years, in an attempt to abort an epidemic of Rubella which is predicted to occur in the winter of 1970-71. The primary purpose of the vaccine is to prevent Rubella and, ultimately, Rubella embryopathy. One of the major problems which the profession faces in the use of the vaccine is the fact that parents are and will be predictably apathetic in obtaining the Rubella immunization for their children because it is generally known that Rubella is a benign disease of childhood. However, it is also known by those families and contacts of family members of expectant mothers who have had Rubella and suffered the consequences of embryopathy, that this disease is ample justification for rather widespread utilization of the vaccine in children. However, most adults have not been appraised of the problem of Rubella embryopathy. Therefore, it behooves those of us in the profession to utilize any and all means of health education at our disposal to encourage parent participation in and enthusiasm for the immunization program so that

future cases of Rubella embryopathy can be avoided.

This month we are beginning the 35th year in our great strides in modern medicine. We are looking forward to the decade which will demonstrate great advances in preventive medicine. This Rubella program which is prologue is one of a long line of many wonderful advances made by the members of all health professions since 1935. Those of us who can remember the events of this 35 year span can look back at the advent of the sulfonamides in 1935, followed by penicillin in the early forties followed by a long list of chemotherapeutic and antibiotic advances. Also the advances in electrolyte therapy, in pre- and postoperative care, surgical techniques, genetic and chromosomal discoveries, battlefield and triage care, and many others are prelude to the type of discoveries and changes in health care which the next ten years will produce.

As we look back at the year 1799 and contemplate the pneumonic process which resulted in the death of this nation's first president and realize that had he been living in 1934 and incurred the same illness, his chances of survival would have been no greater. Realizing this, we can appreciate more fully the advances made in the last 35 years.—Yale E. Parkhurst, M.D.\* □

\*Doctor Parkhurst is a member of the Immunization Committee of the Oklahoma State Medical Association and is in private practice in Norman, Oklahoma.



The medical manpower shortage is a favorite topic throughout the land. This is especially true when the discussion turns to the shortage in the urban slums — now dubbed “Ghettos” — and in the remote and rural areas. Seemingly, everyone has a solution, everyone except those most likely to understand the problem and contribute to the effort—*organized medicine*.

A beginning in Oklahoma has been made by increasing the number of students graduating from the OU School of Medicine. Oklahoma will soon graduate 125 students per year beginning with the current freshman class, of this year, thus making our school 17th in size of graduating classes in the nation. This still doesn't direct these graduates, nor immigrant physicians from

other states, into the 50 or so vacant areas of Oklahoma.

In order to coordinate and guide the efforts of interested governmental, civic, farm, labor, educational and medical associations, our Board of Trustees authorized a Rural Medical Council to be formed. This has been activated and has had its first meeting under the chairmanship of the well-known medical leader, Doctor William C. McCurdy, and his vice-chairman, Doctor James L. Dennis, Executive Vice-President of the Oklahoma Medical Center.

We can expect effective planning and recommendations. The many interested organizations here represented will make this effort of great significance and benefit to those very special persons . . . our patients. At this point, beginning a new year and a new decade, we rejoice in seeing this positive action and cooperative effort between organized medicine and those it serves.

Sincerely yours,

Willard E. Denyer



# The Pathology, Diagnosis and Medical-Legal Aspects of Death by Drowning

CHRISTOPHER E. WIGGINS, B.S.  
JAMES L. LUKE, M.D.

*Most individuals found dead in water are considered to have drowned. This paper is designed to assist in the evaluation of the true cause and manner of such deaths.*

**DROWNING** is the fourth leading cause of accidental death, accounting for approximately seven percent of all accidental fatalities, roughly 5,700 annually in the United States. Clarification of the semantic definition of drowning as well as the specific physiological mechanisms of such deaths would seem desirable. Unfortunately, the assumption is too often made that any dead person found in water must have died by drowning. Reaching such perfunctory conclusions on the basis of probabilities alone is hazardous because it may lead the examiner responsible for investigating and certifying the death to exclude erroneously other causes of death by approaching the case with a relatively closed mind. Confusion in such cases

is also prompted by differing opinions among experts as to which particular anatomic and physicochemical findings are in themselves criteria for establishing the specific post-mortem diagnosis of death by drowning.

Drowning may be defined as any death resulting from (1) a series of biochemical events due to the inhalation of fluid into the lungs or (2) asphyxia occurring when air has been prevented from entering the lungs by a fluid medium. It is not a prerequisite for drowning that the victim's body or even that his head be totally submerged. It is not uncommon for infants, epileptics and alcoholics to drown under circumstances which would not ordinarily have been fatal for the normal adult. Deaths of alcoholics have been reported, for instance, where drowning occurred in a shallow body of water only inches in depth.<sup>3</sup>

In recent years the drowning process has been investigated by a number of methods using various experimental models, in an attempt to elucidate the physiological and biochemical mechanisms representing the functional counterpart of the anatomic findings noted in such cases at the autopsy table. The events involved in the actual act of drowning usually last approximately five minutes, but this interval may be shortened by concurrent pathologic states such as exhaustion or arteriosclerotic heart disease,

From the Department of Pathology, University of Oklahoma Medical Center; Office of the State Medical Examiner, State of Oklahoma.

among many other conditions. Usually the sequence of events is as follows: The drowning individual, if conscious, sinks and rises to the surface a number of times, and in his panic inhales varying quantities of fluid into the tracheobronchial tree, an event which excites the cough reflex and laryngospasm. In ten to 15 percent of drowning cases the victim apparently expires at this point due to reflex cardiac inhibition which is sometimes associated with heart disease of various types or death may simply be due to mechanical asphyxia from unrelenting glottic spasm. This latter series of events helps to explain cases of drowning in which the victim, if removed from the water at once, may show no evidence of inhaled fluid or exogenous particulate matter (e.g., algae, silt, etc.) in his lungs or air passages. If the victim happens to survive this first stage, he loses consciousness because of increasing asphyxia (anoxia, hypercapnia)<sup>11</sup> due to glottic spasm and the inhalation of water, and still submerged, inhales ever increasing quantities of water through repeated respiratory efforts. Inhalation of water results in complex, lethal fluid exchanges across the alveolar wall (see below).<sup>9</sup> From this point forward the specific physiological mechanism of death depends on the tonicity and ionic composition of the inhaled fluid.

Fresh water rapidly traverses the alveolar-capillary wall eventuating in marked hemodilution of alveolar capillary blood, which is pumped from the lungs through the pulmonary veins to the left side of the heart. Through hemodilution, the concentration of all serum electrolytes except potassium rapidly falls. The resultant decreased osmotic pressure causes brisk hemolysis of erythrocytes, releasing intracellular potassium and the consequent hyperkalemia associated with dilutional hyponatremia is believed to induce ventricular fibrillation, a situation which has been experimentally reproduced using various animal models. So massive are the fluid shifts that after only three minutes submersion in fresh water the original blood volume has been diluted by an equal volume of inhaled water.<sup>12</sup> Decreased concentrations of serum calcium and magnesium could well be expected to play a potentiating role in this

regard, though the specific effects of these ions with reference to drowning, to our knowledge, have not been demonstrated experimentally.

In contrast to fresh water drowning, if drowning occurs in seawater, because of the hypertonicity of the medium (approximately three percent NaCl concentration), water is rapidly withdrawn from the alveolar capillary blood into the alveolar spaces causing marked intravascular hemoconcentration, with more gradual circulatory failure than occurs in fresh water drowning. There is little resultant change in the serum sodium/potassium ratio and subsequent ventricular fibrillation usually does not occur in seawater drowning. Movement of plasma into the alveolar spaces results in anatomic changes recognized grossly and microscopically as pulmonary edema. Following experimental salt water drowning of dogs, the blood is found to have lost at least 25 percent of its water content into the lungs by the above mechanism.<sup>12</sup> The active admixture of mucus, plasma, and salt water with air results in the formation of a stable grey or blood-tinged foam within the tracheobronchial tree. If the body is recovered from the water at this stage, such foam might of itself obviate air exchange by intraluminal airway obstruction. Recent experiments where only one lobe of a guinea pig's lung was catheterized and "drowned," without compromising the remaining pulmonary tissue, have resulted in the deaths of 20 percent of these animals from foam-induced airway obstruction.<sup>5</sup>

#### ANATOMIC FINDINGS

The only physical sign on gross examination which may be regarded as presumptive evidence of drowning is the presence of foam or froth which exudes in considerable abundance from the mouth and nares and which fills the tracheobronchial tree. This tenacious froth results from intraluminal admixing of air, water, mucus, and plasma by diaphragmatic excursions. Most authorities consider such foam evidence of intravital reaction, in that active respiration is a prerequisite for its formation. However, the presence of foam cannot alone be taken as *prima facie* evidence that the victim was



alive on entering the water. Another characteristic postmortem finding in drowning deaths involves the alterations demonstrable on the palms of the hands and soles of the feet, colloquially referred to as "washerwoman's skin." Examination of the skin in such cases reveals the epidermis to be uniformly bleached, wrinkled, and sodden, indicating submersion in water for a considerable duration of time (i.e., at least several hours). This particular change is found in both fresh and seawater drowning. Another common finding, but one of dubious significance, is the presence of objects "clutched" in the hand of the drowning victim, material which could have originated only from the intra-aquatic environment, such as aquatic plants and submerged debris. Because of the fact that muscular relaxation occurs at death, coupled with passive movement of the submerged body, it is quite certain that such debris may be artefactually "grasped" by the victim. In the authors' experience, no such entity as cadaveric spasm or the sustained active clutching by the hands after death has been documented, regardless of the cause of death.

On examination of the thoracic contents the lungs are usually found to be distended and to protrude from the thoracic cavity, often to the extent that they approximate at the midline. They are usually two to three

times normal weight and are characteristically stiff in texture. When they are sectioned, considerably less fluid is liberated than would be expected from their weight and the marked degree of distention. The remarkable lack of fluid liberation so commonly noted is the result of absorption and trapping of fluid within the interstitial tissues of the pulmonary parenchyma, a change often noted microscopically. The electron microscopic appearance of the lungs in experimentally induced salt water and fresh water drowning has been described, and the morphologic changes correlate well with the tonicity of the drowning medium.<sup>8</sup>

As noted above, in a substantial percentage of asphyxial deaths by drowning, the lungs are grossly free of water,<sup>2</sup> death having actually resulted from cardiac arrhythmia or asphyxia due to laryngospasm. In such instances, however, inhaled fluid may in fact have been largely absorbed prior to death from the alveolar spaces into the blood stream. In this event, though the lungs will be grossly and microscopically normal, characteristic serum electrolyte and specific gravity alterations will be present, thus differentiating previous inhalation of fluid followed by absorption from deaths due simply to laryngospasm or cardiac arrhythmia.

Plankton, silt, algae, and diatoms are often present on microscopic examination of the pulmonary air passages and alveoli, and their finding is always highly suggestive of drowning. Diatoms are microscopic plants containing a silicate shell of varying morphology. Being composed of silica, their cell walls resist digestion and they can be extracted from internal organs of drowning victims after destruction of the soft tissue, parenchymal organs, and bone marrow by strong acid or by ashing<sup>7</sup> to facilitate histologic recognition. Unfortunately, for forensic purposes, diatoms are ubiquitous in nature,<sup>10</sup> and the possibility of contamination during the performance of the autopsy can never definitely be excluded, no matter what procedure is used. Use of diatoms as specific evidence of death by drowning can be made more conclusive by demonstrating (and quantitating) their presence in closed organs such as the brain, kidney, or bone marrow, after adequate measures have been taken to exclude contamination. The presence of diatoms in

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these organs constitutes corroborative evidence that the victim was alive at the time of submersion. Because of the difficulty of total exclusion of contamination, diatoms can be accepted only as supportive and never as conclusive evidence of drowning.

Confluent or discrete conjunctival and/or galeal petechial hemorrhages are occasionally noted in drowning. Diffuse mucosal or interstitial hemorrhages into the cavities of the middle ears (as seen within the cranium in the temporal bones) have also been described as a finding quite regularly observed in such deaths. However, such "hemorrhages" may indeed be the result of artefact (i.e., congestion and/or prosector-induced) and are also found in deaths due to a variety of other causes, violent as well as natural.

The question is commonly raised as to whether water will enter the lungs in a body submerged in water after death. It has been clearly shown that even under circumstances most favorable for the induction of this change (artificial respiration of a dead body underwater) it is not possible experimentally to cause the passage of more than small quantities of water and particulate matter into the lungs, and in such cases there is no chemical evidence that water has diffused into the vasculature.<sup>9</sup> However, others have contended that it is theoretically possible for more than minimal quantities of water to enter the lungs postmortem, particularly if the victim sinks to a considerable depth, due to the effect of hydrostatic pressure. It would seem that the most rational position to take in this particular controversy is that the finding of large amounts of water in the lungs would constitute presumptive evidence of death by drowning. Here again, examination and comparison of specific gravity and electrolyte concentrations of blood from the pulmonary and systemic circulations, respectively, would be essential for definitive proof of drowning.

#### CHEMICAL FINDINGS

Additional corroborative evidence of drowning is often found in the circulatory system. The right side of the heart is usual-

ly rather dilated and contains a considerable quantity of fluid blood due to compression and attenuation of the pulmonary circulation by the inhaled water. Probably the simplest and, according to some, the most reliable test to prove drowning as the cause of death is the demonstration of whole blood specific gravity in the left ventricle which is lower than that of the right, in cases of fresh water drowning. This particular finding is reversed in salt water drowning when, because of hemoconcentration (see above), left heart blood has a higher specific gravity than right heart blood.

Various other tests regarding altered composition of heart blood in drowning have been described; for example, the finding of a decreased chloride concentration in blood from the left heart as compared to the right in fresh water drowning. However, such chloride determinations must be performed shortly after death and it must be remembered that aspiration of chloride-rich gastric contents or the inhalation of chlorinated water during the drowning process may lead to artefact in this determination.<sup>1</sup> During the process of drowning, varying quantities of the drowning medium are often swallowed, but whether this fluid can be identified specifically as the drowning medium will vary with the character and quantity of the pre-existing gastric contents. When, for example, the stomach contains a disagreeable liquid which ordinarily would not have been ingested voluntarily and which corresponds grossly or chemically to the drowning fluid, such a finding may be taken as corroborative evidence of drowning.<sup>3</sup> In addition, the presence of aquatic debris in the stomach would offer confirmatory evidence of the diagnosis of drowning. Experiments have clearly shown that such fluid will not enter the stomach after death. Additionally, when advanced putrefaction is present, ingested and/or aspirated fluid will have been expressed from both the stomach and lungs by post-mortem gas formation and will not be found at autopsy.

#### POSTMORTEM ARTEFACT

It should be emphasized that the presence of traumatic injury noted on recovery of a body from water must not be automatically



ascribed to premortem violence. Marine animals can and often do inflict extensive postmortem damage. Submerged bodies may sustain injuries of various types from the proellers of passing boats or the exposed skin may be abraded against the rough surfaces of piers, the shoreline, or the bottom. Such postmortem trauma is often quite characteristic, anatomically, to the experienced observer, but histologic examination must occasionally be utilized to distinguish antemortem from postmortem trauma. However, with progressive postmortem decomposition it becomes increasingly difficult to make such anatomic distinctions, even microscopically.

#### DISCUSSION

Of paramount importance in the accurate medical-legal evaluation of cases of death by drowning is the correct interpretation of the circumstances surrounding the event. All too often the attempt is made to certify such deaths *ex vacuo*, that is, on the basis of medical evidence alone, and without regard to such equally important considerations as the victim's habits . . . (Was he an alcoholic? Was he known to frequent waterfront areas? Could he swim?) . . . and of special importance—were there suspicious circumstances surrounding the death which might tend to implicate criminality? These questions can be answered only if they are asked, and it is the responsibility of the doctor certifying such deaths and of the law enforcement authorities to actively seek out this information, because only seldom is it volunteered.

Although drowning as a method of homicide is exceedingly rare in adults, it is quite common in children,<sup>4</sup> and because children are so easily overpowered, they may show no external evidence of trauma. Any childhood drowning death that is not actually witnessed, no matter where it occurs, should be considered a suspicious case. Disposal of adult homicide victims is occasionally attempted by placing the body in water to feign accidental death, in which instance the

classic signs of death by drowning are often absent and the first real clue of the actual manner of death may be in the form of suspicious circumstantial evidence. The body of every drowning victim must be completely undressed and carefully examined for signs of premortem trauma. If it is not, instances of masked homicide will go undetected.

#### SUMMARY

The diagnosis of death by drowning can be made only after all of the evidence (anatomic, physicochemical and circumstantial) has been carefully assimilated and evaluated. The finding of disease or injury which would have caused death in and of itself and the failure to find evidence that the victim was alive during some part of the submersion would mitigate against drowning as a specific cause of death. Conversely, the absence of a potentially fatal disease or injury and anatomic and/or physicochemical evidence of viability in water offer reliable evidence that death, indeed, resulted from drowning.<sup>6</sup> □

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800 N.E. 13th Street, Oklahoma City, Oklahoma 73104

# Chickenpox Confused With Smallpox

## Case Report

IRA KASSANOFF, M.D.\*  
R. LEROY CARPENTER, M.D.\*\*

*A 30-year-old Latin American, with recent visitors from Mexico, developed high fever and pustular rash including palms and soles. The initial dilemma was quickly resolved when guidelines discussed in this paper were applied.*

A major problem in the differential diagnosis of vesiculopustular rash is distinguishing between smallpox (variola) and chickenpox (varicella), a difficulty encountered in several recent European outbreaks.<sup>1, 2, 3</sup> The rarity of smallpox in many parts of the world today and the subsequent lack of familiarity with smallpox in those areas further complicates the problem. An infected person conceivably could have smallpox inaccurately diagnosed as chickenpox and disseminate the disease widely before the true nature of his illness was recognized. In the recent outbreaks mentioned above, smallpox

was not correctly diagnosed until the third generation or later. Where the immune status is low and the patient mobile, the results are potentially severe. This paper describes a case of chickenpox suspected of being smallpox and outlines the differentiation of the two diseases.

### CASE STUDY

On Sunday, November 12, 1967, a 30-year-old Roman Catholic Nun of Latin-American descent, complained of mild lethargy with associated myalgias and weakness. Over the next three days, the symptoms grew slightly worse until on the third day she remained in bed rather than carry out her duties as a kitchen worker in a Catholic junior college in Oklahoma. On the evening of the third day her rectal temperature was 102°F., and she complained of mild headache, nausea, and muscle aches including aching in the low back. She had no temperature elevation, rash, respiratory symptoms, vomiting, or diarrhea prior to this. On the morning of the fourth day approximately ten hours after fever had developed, a vesicular non-pruritic rash developed on the face and anterior and posterior aspects of the trunk (Figures 1, 2, 3). Arms and legs were involved but relatively less so than the torso (Figure 4). Scattered lesions were found in the mouth and on scalp, palms, and soles; pressure points were not prominently involved. When seen by her private physician approximately four days

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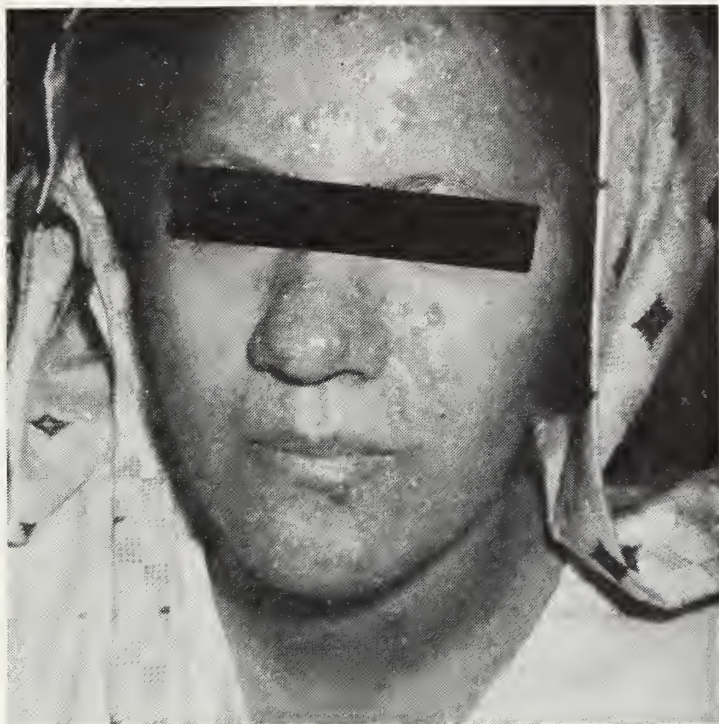


Figure 1.

after the onset of the illness and 24 hours after the rash first appeared the rectal temperature was still 102°F., and many of the lesions had become pustular. At this point, a diagnosis of smallpox was considered and the state health department was called in consultation. Late in the fifth day after onset, when state health department physicians first saw the patient, the systemic symptoms and fever had abated with aspirin therapy. The rash had become differentiated into distinct "crops", encompassing many different stages of development including macules, papules, vesicles, and pustules (Figure 3). The distribution of the rash, as described by the referring physician, had changed slightly, with the scalp, nose, and shins becoming more involved. The irregularly shaped lesions, a few of which were umbilicated (Figure 2), varied in size from 0.1 to 0.5 mm and involved only the superficial layers of the skin. She had received smallpox vaccine in 1962 and 1966, but she could give no clear history of a "take." No vaccination scars were found. Her siblings all had had chickenpox, but she did not recall having had it herself.

#### EPIDEMIOLOGIC DATA

The patient did not know of any recent exposure to either smallpox or chickenpox, nor had she been out of the United States within the year. She had, however, had con-

tact with visitors from Mexico two weeks before the onset of her illness. None were known to be ill. (Mexico has not reported a case of smallpox since 1955.<sup>4</sup> This led to the elimination in 1967 of the smallpox vaccination requirement for travelers between the United States and Mexico.<sup>5</sup>) Although she had gone into a nearby city on a shopping trip three weeks prior to onset, this was her only trip off campus in the preceding three months. She worked with other nuns in the kitchen and was continually exposed to the students in the cafeteria. One student who frequented the cafeteria had had a two-day illness characterized by chills, sore throat, diarrhea, and an erythematous maculopapular eruption on his hands, forearms, and upper chest. He had not traveled recently and had received smallpox vaccine three years before. No other students had been reported ill in the preceding two weeks. She had had no known contact with people who may have been in areas endemic for smallpox.

#### LABORATORY FINDINGS

The following data were obtained from the Vesicular Disease Laboratory at the National Communicable Disease Center in Atlanta, Georgia:

*Electron Microscopy.* Exudate was aspirated from several pustular lesions on the fifth day of illness. A virus of the *herpes simplex*, varicella-zoster group was visualized by electron microscopy.

*Serologic Studies.* Acute and convalescent sera were subjected to the complement fixation test.



Figure 2.



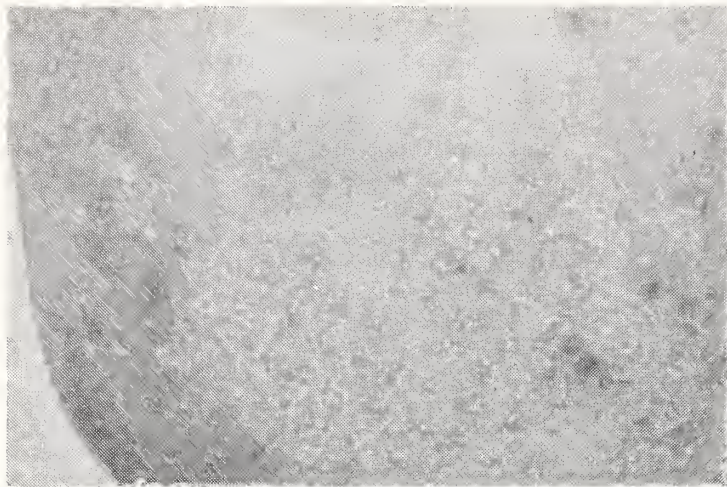


Figure 3.

The following reciprocal titers were attained:

	serum 1 11/17/67 (5 days after onset)	serum 2 12/8/67 (26 days after onset)
<i>herpes simplex</i>	<8	<8
Vaccinia virus	<8	<8
Varicella virus	<8	64

*Culture.* No virus was isolated from vesicular fluid placed in human embryonic lung fibroblasts.

DISCUSSION

This case illustrates an instance in which clinical judgment played the major role in differentiating smallpox from chickenpox. This distinction, once one suspects that smallpox may be a consideration, is imperative, since prompt diagnosis and isolation may prevent widespread dissemination. Usually the clinical facts are adequate; rarely is it necessary to rely on the laboratory for diagnosis.

Table 1 describes the features that distinguish, in general, chickenpox from smallpox or vaccine-modified smallpox. The prodrome is usually one of the most helpful differential characteristics. In chickenpox, the prodrome may be mild or not recognizable. Fever often begins with the eruption in chickenpox, whereas in smallpox the fever starts with the prodrome and tends to fall as the eruption appears. In smallpox, the prodrome consists of two to four days of a "flu-like" illness with fever and/or prostration. Myalgia is often quite marked in smallpox, with severe backache an occasional presenting

symptom. In this case, fever developed in the third day of the prodrome, appearing almost at the same time as the rash, and did not fall off as the rash appeared. The backache she experienced may have been related to her moderately severe myalgias. Although in this case the prodrome was unusually long for chickenpox, it was not as severe as that usually found in smallpox. When a person contracts variola the prodrome of fever, marked prostration, and severe myalgias is a differential point unlikely to be modified by smallpox vaccine and is one of the more reliable differential points.

Another important differential point is the development stage of the individual lesions. In smallpox (including disease modified by vaccine), the lesions all tend to be at the same development stage or maturation and appear uniform in size and shape. In chickenpox, the lesions are in many different stages of development and tend to "crop"—some small, some large, some papular, some vesicular. In the above case, the finding of "crops" helped determine the diagnosis. When distinguishing vaccine-modified smallpox from chickenpox, the maturation level is a somewhat less reliable sign than the prodrome, but still very useful.

The other features delineated in Table 1 can help distinguish classic smallpox from chickenpox, but they are less reliable if the patient has been vaccinated. In this instance, the lesser features were helpful in assuring



Figure 4.



TABLE 1  
DIFFERENTIATION OF CHICKENPOX, SMALLPOX, AND VACCINE-MODIFIED SMALLPOX

DIFFERENTIATING CHARACTERISTICS	DISEASE		
	Chickenpox	Smallpox	Modified Smallpox
Incubation Period	14-19 days	12-14 days	12-14 days
Prodrome	Absent or 1-2 days of mild anorexia and malaise. Fever delayed to onset of eruption.	2-4 days of flu-like illness. High fever, myalgia, prostration, "backache". Fever drops off as rash appears. Rash appears 2-4 days.	Same as smallpox. Not likely to be modified by vaccination.
Lesion Characteristics			
Size	Small — 1-4 mm	Large— $\frac{1}{2}$ -1 cm	Small or large
Distribution	Centrifugal—peripheral	Centripetal — truncal	Centripetal or centrifugal
Location	Pressure points equally affected.	Less frequent over pressure points.	Findings unreliable.
Depth	Lesions superficial with fluid between layers of epidermis.	Lesions deeply involve all layers of the skin, feel "fixed", appear umbilicated.	Superficial or deep.
Hardness	Vesicles feel flimsy. Lesions collapse easily.	Vesicles "shotty", self supporting, firm.	Firm or flimsy.
Maturation	Lesions mature 8-48 hours. Tend to "crop".	Lesions mature 7-10 days. Simultaneous maturation of lesions at any anatomical sites.	Lesions can mature early or in 3-10 days. Generally simultaneous maturation
Laboratory	Virus fragile. Cannot be easily grown, particularly if specimens taken late.	Virus hardy and easy to grow.	Virus hardy and easy to grow.

the clinical diagnosis. The lesions were centripetally distributed, and they were generally more superficial than one would expect in smallpox. The lesions matured early and only rarely appeared umbilicated. There was involvement of the pressure points (shins and small of back), but this was not well delineated.

In assessing the clinical diagnosis, certain

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epidemiologic factors also were considered. The patient's lack of contact with people from smallpox endemic areas was reassuring. Mexico, the only foreign country from which she had had visitors, has been smallpox-free for over a decade, and although her contact with the Mexicans was minimal, this history was useful in ruling out smallpox. The history of two previous smallpox vaccinations was also an important consideration, although often such histories must be disregarded because of lack of uniformity in vaccination techniques as well as in the enforcement of international requirements.

Laboratory findings confirmed the diagnosis of chickenpox. Electron microscopy, as in this case, has become one of the most useful laboratory aids. The smallpox, vaccinia, cowpox virus group can be distinguished from the *herpes simplex*, varicella-zoster groups in ten to 20 minutes. The other principal advantage is that it can be used at all stages of smallpox eruption with good results.<sup>1,6</sup> Culture techniques are less reli-

able particularly when the diagnosis is varicella. Smallpox virus, which lacks the heat lability of chickenpox virus, is relatively easy to grow; however, with the development of the electron microscope, culture techniques as diagnostic tools are often confirmatory rather than diagnostic. Serologic methods can be useful, but they do not distinguish between vaccinia and smallpox. In this case, where varicella was the diagnosis, the complement fixation test was useful both for differentiating chickenpox from variola-vaccinia as well as for confirming the diagnosis.

What might have happened had this been a case of smallpox? The month before the patient became ill, questionnaires were sent home with all 800 first-grade students in the county; 75.5 percent of 711 respondents to 800 questionnaires were adequately protected against smallpox. Adequate protection was defined as a primary vaccination in a school-age child or vaccination any time within the preceding ten years for adults. First-grade children had been the object of an intensive immunization campaign in the year preceding the patient's illness. No similar effort had been directed at adults in the preceding 15 years. Had this been smallpox the adult population might have been susceptible. The 75 percent immune level, as found in the children, is said to prevent propagation of a smallpox epidemic.<sup>8</sup> Although the adults were not surveyed, the state health department considered their immunity level to be below 75 percent. Under the circumstances, prompt and accurate diagnosis of the illness was important.

#### SUMMARY

A case of adult chickenpox was initially

confused with smallpox. These two diseases, although sometimes having the same clinical appearance, are different in their potential danger to the general population. Smallpox can be highly communicable with much morbidity and mortality; whereas chickenpox is usually a benign disease with only occasional severe complications. Important distinguishing features are the prodrome and the morphologic character of the lesions. Laboratory tests are more often used to confirm the diagnosis rather than establish it. Prompt diagnosis is vital since large segments of certain populations may be susceptible to smallpox and will contract the disease when exposed to an infected individual.

#### ACKNOWLEDGEMENT

The authors wish to acknowledge Doctor Frank H. Howard for his prompt reporting of this case to public health officials and for his invaluable aid in averting a community panic. □

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## EMPLOY A STUDENT

### One Hundred Twenty Medical Students Seek Summer Employment

More than 120 medical students at the University of Oklahoma School of Medicine are seeking summer employment during June, July and August of 1970. Working through the Oklahoma State Medical Association's Medical School Liaison Committee,

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# Geographic and Secular Variation in Mortality From Malignant Disease in Oklahoma 1956-1965

NABIH R. ASSAL, Ph.D.  
ROBERT D. LINDEMAN, M.D.

*A striking decrease in stomach cancer mortality was reported for Oklahoma.*

*No unusual geographic clustering for gastrointestinal tract malignancies was found compared to other cancer sites.*

## III CANCER OF THE GASTROINTESTINAL TRACT (ISC 150-159) INTRODUCTION

*Stomach Cancer:* Age-adjusted mortality from stomach cancer has shown a progressive decline over the last 30 years. The 1960 death rates in the white male and female groups are about one-third those seen in 1930. No satisfactory explanation has been found for this consistent decline in death rates.<sup>27,28</sup> The mortality rates for gastric cancer are twice as high in males as in females, and higher in nonwhites than in whites.<sup>27,28</sup>

Regional mortality statistics show low gastric cancer mortality in the south for both sexes with the highest rates observed in the Middle Atlantic States.<sup>45</sup> Japan, Austria and

Finland experience the highest mortality rates for cancer of the stomach and the Caucasian populations of Australia, New Zealand, Canada and the United States experience the lowest rates.<sup>35,40</sup> South American countries appear to have high rates in general.<sup>35,40</sup> Haenszel indicated that the foreign born have significantly higher risks than the native born of the United States.<sup>20</sup> The Japanese of Japan experience a much higher gastric cancer death rate than the Japanese of Hawaii or of the West Coast.<sup>39</sup> In Hawaii, the Japanese experience the highest rates.<sup>45</sup> The mortality from stomach cancer in Israel among East European immigrants is much higher than among those of Asian or African origin.<sup>43</sup> The high mortality from stomach cancer in Costa Rica is found in inhabitants of communities located on elevated plateaus and inhabited by low income people.<sup>42</sup> High rates of gastric cancer also were observed in mountainous countries such as Chile, Japan and Switzerland.<sup>40</sup>

Approximately twice as much cancer of the stomach is found in relatives of patients with the disease than in control groups.<sup>24,30,45</sup> Rates of gastric cancer in achlorhydria and pernicious anemia patients are four to five times those observed in normal populations.<sup>6</sup>

Segi found that patients with gastric cancer use less salty food, eat irregularly, and use more alcohol than controls.<sup>34</sup> Some in-

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investigators have noted an association between ingestion of smoked food and incidence of stomach cancer. Wynder and his associates confirmed the association of irregular eating habits with gastric cancer, but found no relationship of ingestion of smoked food with the disease.<sup>47</sup> Higgenson found an association between increased use of animal fats and a high risk of gastric cancer.<sup>22</sup> Acheson and Doll found no excess risk associated with use of any specific food and drink.<sup>1</sup> It has been reported that iron dust workers and users of purgatives experience a high risk from stomach cancer,<sup>7,45</sup> Japanese studies show some correlation between gastric cancer and gastric ulcers.<sup>45</sup> Other reports show no association between tobacco smoking, alcohol consumption and gastric cancer.<sup>45</sup>

Studies by Cohart *et al.*<sup>12</sup> and Graham *et al.*<sup>18</sup> in the United States, Clemmeson and Nielson in Denmark<sup>11</sup> and the British Registry General<sup>17</sup> show an increase in gastric cancer with a decrease in socioeconomic status. Urban areas report slightly higher rates than rural areas.<sup>37,41,19</sup>

*Cancer of the Large Intestine and Rectum:* Data from Connecticut and Upstate New York show a leveling off of mortality from cancer of the large intestine and rectum for both males and females over the last ten years.<sup>45</sup> These reports are consistent with

the national trends that indicate a leveling off of age-adjusted mortality over the last thirty-five years.<sup>28</sup>

In the United States and some European countries, colon cancer occurs more commonly among women than among men; however, the reverse is true for other areas of the world.<sup>27,28,40,45</sup> On the other hand, rectal cancer is more common among American men than women.<sup>27,28,40</sup> The whites experience higher death rates from colon cancer than the nonwhites in the United States.<sup>27,28,40</sup>

Haenszel and Dawson reported that large bowel cancer is more common in the northern portions of the United States than in the southern or central portions.<sup>21</sup> Large bowel cancer occurs with low frequency in Asiatic countries, such as Japan, in East European, African, and South American countries.<sup>45</sup> Italio-Americans have a higher risk of cancer of the colon than any other foreign-born group in the United States.<sup>20</sup> Jews in New York City experience a higher rate of cancer of the colon than any other religious group,<sup>31</sup> whereas, there are no religious differences in the death rates for cancer of the rectum.<sup>20,31</sup>

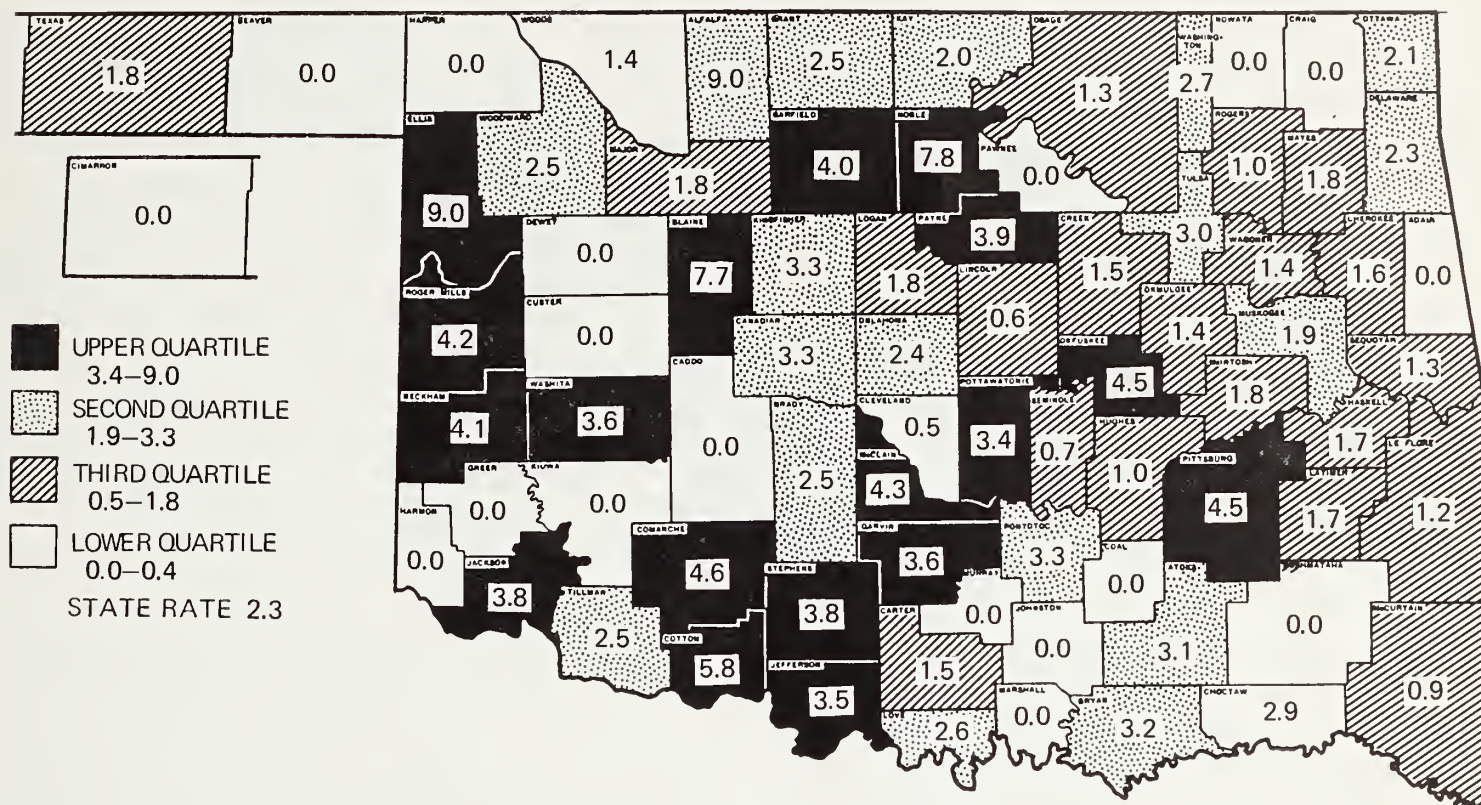
Epidemiologic evidence indicates a negative correlation between gastric and colon cancer mortality suggesting opposing etiological factors.<sup>45</sup> However, a positive correlation is indicated between cancer of the colon and arteriosclerotic heart disease and

Table 1  
Cancer Deaths By Specific Site, Oklahoma (1956-1965)  
(Number in parentheses indicates order of rank in relation to 34 major cancer sites)

Cancer Site	White Male	White Female	Nonwhite Male	Nonwhite Female	Total
Esophagus (ISC 150)	246 (15)	82 (24)	56 ( 9)	6 (24)	390 (20)
Stomach (ISC 151)	1318 ( 4)	825 ( 7)	165 ( 3)	118 ( 5)	2426 ( 4)
Small Intestine and others of G. I. (ISC 152, 158-9)	152 (22)	160 (18)	44 (10)	12 (19)	368 (21)
Large Intestine and Rectum (ISC 153-4)	1782 ( 3)	2101 ( 2)	129 ( 4)	188 ( 3)	4200 ( 2)
Liver (ISC 155-6)	683 ( 8)	667 (11)	116 ( 5)	92 ( 7)	1558 ( 9)
Pancreas (ISC 157)	1037 ( 6)	698 (10)	85 ( 7)	65 ( 9)	1885 ( 8)
Total (ISC 150-159)	5218	4533	595	481	10827



Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population



1. Average Annual Age-Adjusted Death Rates for Cancer of the Esophagus (ISC 150) White Males.

between familial polyposis and large bowel cancer<sup>2,15</sup> Wynder found a negative correlation between smoking cigarettes and sigmoid colon cancer but a positive association with cigar smoking.<sup>48</sup> These associations appear to be related to obesity, as colon cancer patients appear to be slightly heavier than controls.<sup>48</sup> Boyd and Doll found that patients with large bowel cancer had used liquid paraffin and vegetable base purgatives more often than controls.<sup>7</sup>

Socioeconomic status does not seem to influence the rates for either cancer of the colon or rectum.<sup>11, 12, 45</sup> In the United States, urban areas experience a much higher large bowel cancer rate than rural areas.<sup>21</sup>

*Cancer of the Esophagus and Pancreas:* Trends in age-adjusted cancer death rates show a slight increase in mortality from cancer of the esophagus among the males and a constant rate among the females over the last fifteen years. Adjusted mortality from cancer of the pancreas shows a steady increase for both sexes over the same time period.<sup>27,28,40</sup>

Males experience higher death rates than females for both cancer of the esophagus and pancreas.<sup>27,28,40</sup> The nonwhites experience

a much higher mortality from cancer of the esophagus than the whites. The mortality for cancer of the pancreas is only slightly higher in the nonwhites vs. whites.<sup>27,28,40</sup>

International comparisons reveal a high adjusted death rate for cancer of the esophagus among the French males and the

---

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U.S. nonwhite males and a low rate among the Swedish, Danish and U.S. white males. The Israeli female and the U.S. nonwhite male had the highest death rates and the Japanese males and females the lowest for cancer of the pancreas. Heavy alcohol consumption and smoking are associated with an increased incidence of cancer of the esophagus.<sup>35,40</sup>

The report of the Research Committee of the World Health Organization on the etiology of cancer of the gastrointestinal tract indicates that excesses or deficiencies of dietary factors exert an important influence on the development of both gastric and large bowel cancer.<sup>45</sup>

The purpose of the present study was to make observations on the geographic and secular variation in mortality from malignant disease between 1956-1965 in the counties of Oklahoma in order to identify clusters of high and low mortality. An attempt was made to relate these clusters to some factors in the environment which might be affecting death rates. This third report deals with malignancies of the gastrointestinal tract.

#### METHODS AND PROCEDURES

Mortality data were obtained from death certificates filed in the office of vital statistics, Oklahoma State Health Department. Information from all resident death certificates from malignancies filed between 1956

and 1965 was transferred to IBM cards for tabulation.

Deaths from malignant disease were subclassified by sites of involvement using the international statistical classification (ISC) of disease code revised in 1955.<sup>25</sup> The data in this report includes an analysis of malignancies involving the following sites:

ISC CODE	SPECIFIC SITE
150	Esophagus
151	Stomach
152, 158-159	Small intestine, Peritoneum and others of G.I.
153-154	Large intestine and rectum
155-156	Liver
157	Pancreas

The data were grouped into two five-year periods (1956-60, 1961-65) to establish secular trends, by sex and race (white, nonwhites) and by age (<5, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75+) to quantify age-sex-race specific rates and by county to establish geographic distribution. The Oklahoma resident population by age-sex-race and county was estimated for the mid point of each five-year period from the 1950 and 1960 censuses.

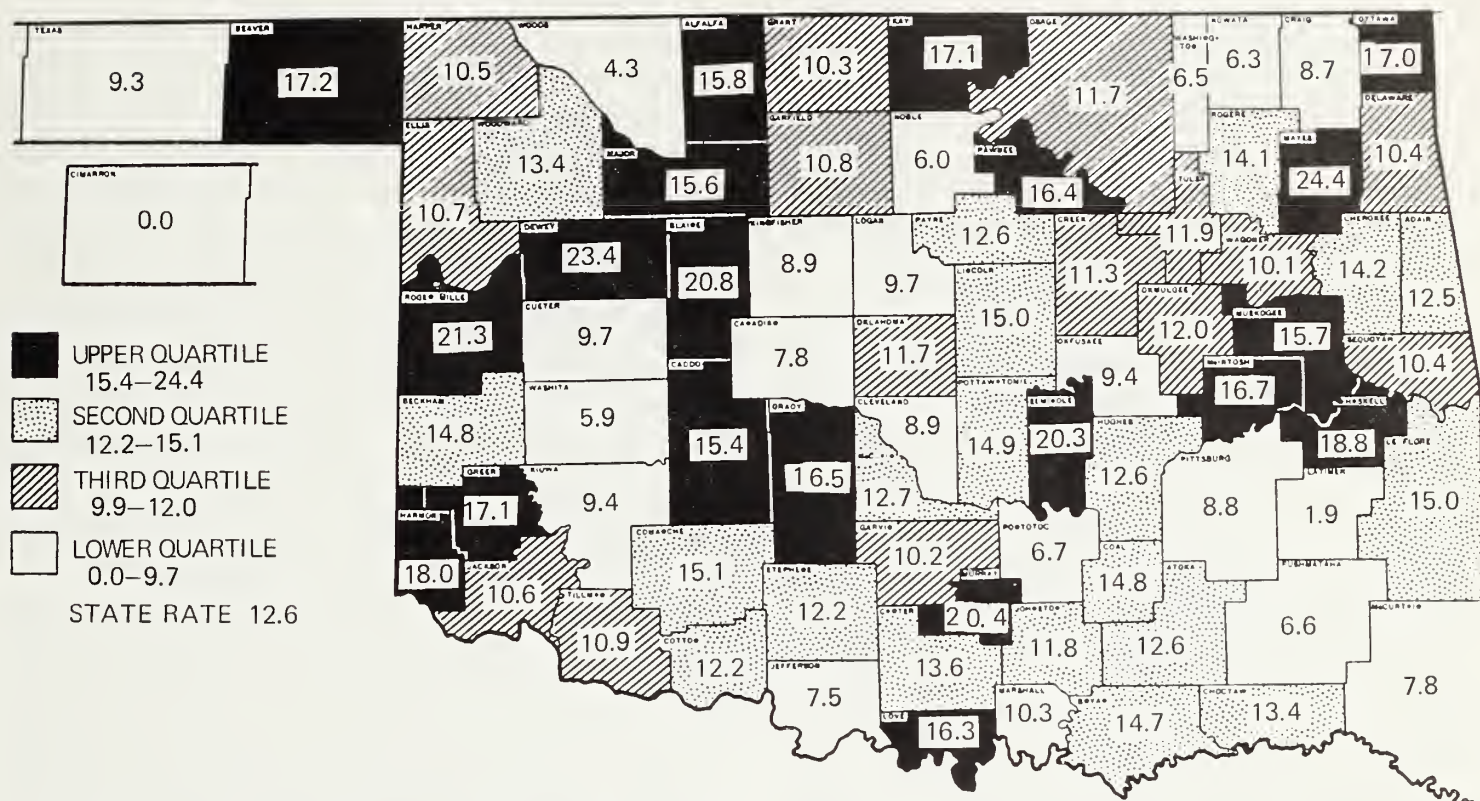
The direct method of adjustment,<sup>23</sup> using the 1960 Oklahoma white male census as the standard, was utilized to calculate age-sex-race adjusted death rates per 100,000 populations for the 77 Oklahoma Counties for the two five-year periods. The average annual age-adjusted death rates for the entire ten year period were tabulated by county and

Table 2  
Age-Adjusted Death Rates for Cancer of the Gastrointestinal Tract by  
Site, Sex, Race, and Two Five-Year Periods

Cancer Site	Years	White Male	White Female	Nonwhite Male	Nonwhite Female
Esophagus (ISC 150)	1956-1960	11.9	3.3	24.2	2.0
	1961-1965	11.5	3.3	35.4	4.8
Stomach (ISC 151)	1956-1960	72.6	37.1	86.3	58.3
	1961-1965	53.5	30.9	87.3	57.0
Small Intestine (ISC 152)	1956-1960	8.2	4.7	19.7	4.1
	1961-1965	6.2	8.0	26.2	7.3
Large Intestine and Rectum (ISC 153-4)	1956-1960	87.8	86.0	70.0	89.1
	1961-1965	82.2	85.4	67.0	94.2
Liver (ISC 155-6)	1956-1960	32.2	31.7	35.2	42.3
	1961-1965	32.7	23.0	86.4	47.6
Pancreas (ISC 157)	1956-1960	50.9	27.9	35.2	29.8
	1961-1965	47.9	28.5	53.8	33.4



Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population



2. Average Annual Age-Adjusted Death Rates for Cancer of the Stomach (ISC 151), White Males.

plotted on Oklahoma maps.

Ideally, we would like to determine if the disease frequency formed patterns of irregular distribution (clustering) or was distributed randomly within the state. Therefore, based on the mortality rate for each malignancy by site of involvement, the 77 Oklahoma Counties were divided into four quartiles. Three or more adjacent counties in the highest or lowest quartiles were examined as a "cluster." The presence of geographic clustering was also tested by the Kendall Method<sup>36</sup> by determining the similarity between male and female death rates by county.

Counties in the state were designated as (1) metropolitan, if the county contained a major city with a population over 30,000; (2) non-metropolitan, if the county contained a major city with a population between 15,000 and 30,000; or (3) rural, if the county did not contain a major city with a population of at least 15,000 in order to examine differences in mortality between urban and rural areas. Based on the 1960 Oklahoma census, ten counties are classified as metropolitan; 17 as non-metropolitan, and 50 as rural. To ascertain if significant differences in mortality existed among the three urban-

ization classes, the white male and female average annual age-adjusted death rates by county were ranked and tested by the Kruskal-Wallis rank test.<sup>36</sup>

The socioeconomic distribution of Oklahoma by county of residence was determined through an index utilizing the major determinant of socioeconomic status mainly: (1) the average per capita income, (2) educational level, (3) condition of housing, (4) and the number of persons per 100,000 receiving aid to dependent children (ADC).

The mineral map of Oklahoma was looked at in an effort to ascertain mineral resources areas. The elevation map of Oklahoma was used to determine the influence of elevation on mortality. The crop land distribution map was used to determine areas where toxic insecticides are being used.

## RESULTS

The methods and procedures as outlined in the previous report were followed and applied to 10,827 deaths from cancer of the gastrointestinal tract occurring among Oklahoma residents from 1956-1965. Among the white males and females, the leading cause of gastrointestinal cancer death was cancer of



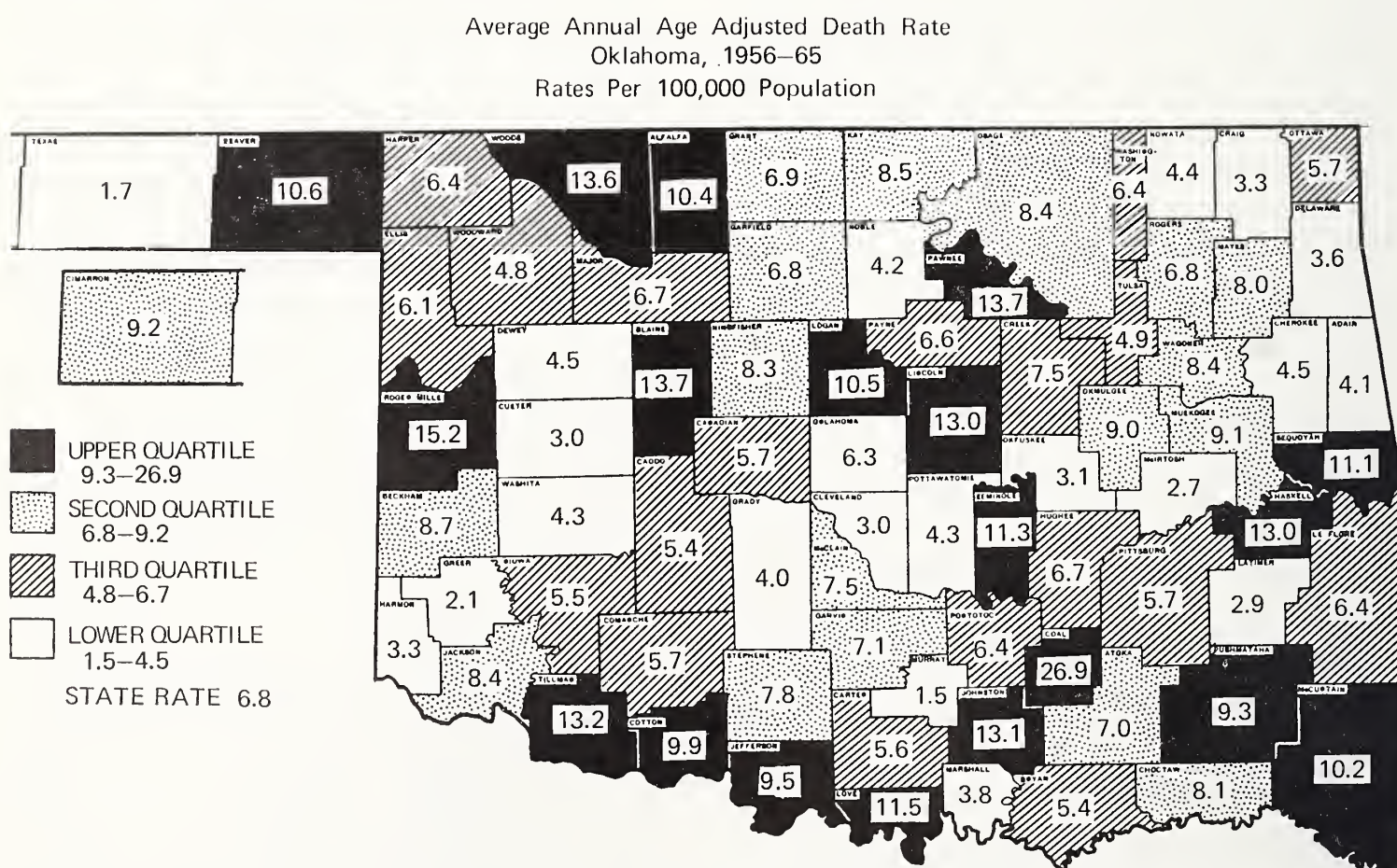
the large intestine and rectum followed by cancer of the stomach, pancreas, and liver. Among the nonwhite population the order of rank changed; stomach cancer ranked first among the males followed by cancer of the large intestine and rectum, liver, and pancreas, while cancer of the large intestine and rectum ranked first among the females followed by stomach, liver, and pancreas. More males died from cancer of the esophagus than small intestine, while more females died from cancer of the small intestine than cancer of the esophagus (Table 1).

Cancer of the lung, trachea, and bronchus, and cancer of the prostate gland among the males ranked ahead of cancer sites of the G.I. tract, while cancer of the breast and cervix among the females ranked higher (Table 1).

An increase in age-adjusted death rates from cancer of the esophagus (ISC 150) was observed only among the nonwhites. The males, both white and nonwhite, experienced higher mortality than the females during the ten year period (Table 2). The geographic distribution of mortality for cancer of the esophagus among the white males shows an

apparent increase in prevalence in the western and south-central counties (Figure 1). A high cluster area appears in the eastern counties bordering Arkansas for the white female. Less than half the Oklahoma Counties failed to experience at least a single death of a white female from cancer of the esophagus during the ten year period so that inclusion of the map indicating the geographic distribution was not warranted.

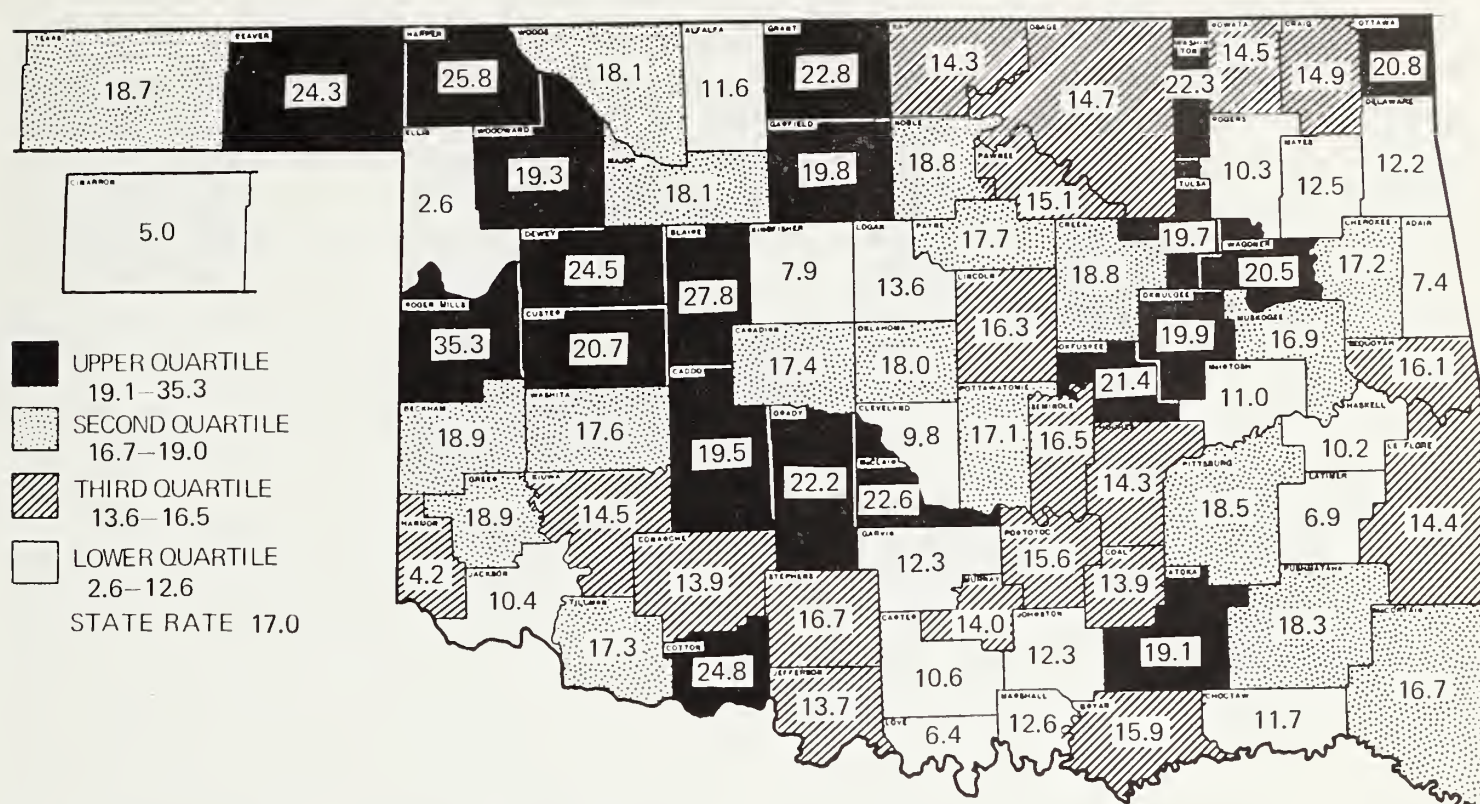
Age-adjusted mortality from stomach cancer (ISC 151) among the white population shows a decline over the two five year periods (Table 2). This decline was consistent for all age-specific death rates. No such trends in stomach cancer mortality were observed among the nonwhite population (Table 2). The males, both whites and nonwhites, experienced much higher age-adjusted death rates than the females. The nonwhite population experienced slightly higher rates than the white (Table 2). While the geographic distribution of adjusted mortality by county for the white males shows an apparent increase in prevalence in the western counties (Figure 2), the distribution for the white females appears to be a random one favoring no area in particular (Figure 3).



3. Average Annual Age-Adjusted Death Rates for Cancer of the Stomach (ISC 151), White Females.



Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population



4. Average Annual Age-Adjusted Death Rates for Cancer of the Large Intestine and Rectum (ISC 153-154), White Males.

Insufficient deaths occurred among Oklahomans from cancer of the small intestine (ISC 152) and peritoneum and others of the digestive system (ISC 158-9) to warrant analysis by county. The age-adjusted death rates show an increase over the two five-year periods for all groups except the white males where a slight decrease was found. The age-specific death rates are also inconsistent, showing a decrease for some groups, an increase for others. High rates were found among the nonwhite males (Table 2).

The age-adjusted death rate for cancer of the large intestine and rectum (ISC 153-154) remained almost stable. The change is very slight with a decrease in all groups except the nonwhite females where an increase is noticed. The male and female rates are about the same among the whites but an increase among the nonwhite females is observed (Table 2). A definite increase in mortality among both the white males and females is observed for the northwestern counties of Oklahoma. There also appears to be a cluster area in the northeast counties among the white males (Figures 4 and 5).

Mortality rates from liver malignancies (ISC 155-6) are difficult to interpret because the liver is an organ to which cancers of

other sites frequently metastasize. Age-adjusted death rates show a stable trend for the white males, a decrease for the white females, and an increase for the nonwhite population. Though no obvious sex differences are noted, the nonwhites in general experience higher rates than the whites (Table 2). The geographic distribution of mortality by county, though no map is included in this report, shows a generally higher prevalence in the northeastern counties among the males and the eastern counties among the females.

Cancer of the pancreas (ISC 157) mortality shows no change with time among the white population of Oklahoma, but a slight increase is reported for the nonwhites. Males, in general, experience higher adjusted mortality than do females. No racial differences appear in Oklahoma (Table 2). The geographic distribution by county among the white males shows high mortality rate areas in the southwestern and eastern counties (Figure 6).

Significant urban-rural differences were found for cancer of the stomach among the white female ( $p < 0.05$ ), and for cancer of the liver and pancreas among both males ( $p < 0.05$ ) and females ( $p < 0.01$ ). The mean average annual age-adjusted death



rates for cancer of the stomach among the females appear to increase with decrease in urbanization while the opposite is true for cancer of the liver among the males and cancer of the pancreas among both males and females (Table 3). No significant urban-rural differences of adjusted mortality were found for cancers of the stomach among the male and cancer of the large intestine and rectum among both males and females.

The Kendall rank correlation coefficient is between - 0.00329 (cancer of the esophagus) and 0.16372 (cancer of large intestine and rectum). A significant Z value is indicated for cancer of the large intestine and rectum (Table 4) suggests an influence of environmental factors on both males and females dying from cancer of the large intestine and rectum.

#### DISCUSSION

**SECULAR TRENDS:** The secular trends of adjusted mortality for cancer of the gastrointestinal tract observed in Oklahoma are consistent with the national trends. The only cancer site where a consistent change has been noticed is cancer of the stomach. Malignancies of this site show a steady decline among both white males and females. The trends for other gastrointestinal sites do not show any definite trends and therefore we

cannot utilize them as epidemiologic tools.

The most probable reason for changes in secular trends are those due to improvement in diagnosis. Decreases in mortality from cancer of the stomach have been suggested to be due to previous misdiagnosis, especially of cancers of other sites of the digestive system, such as that of the pancreas and the esophagus. The Oklahoma adjusted mortality rates for cancer of the digestive system other than stomach have not reported any dramatic increases or changes to account for the large decrease from gastric cancer in Oklahoma during the two five year periods studied.

Lilienfeld<sup>27, 28</sup> suggested that improvements in diagnosis are most marked for the aged. The declines in age-specific mortality for cancer of the stomach among the white population occurred for all age groups, but were more pronounced for the aged. It is then reasonable to conclude that improvement in diagnosis had some influence on the overall adjusted death rates for stomach cancer. However, despite this influence, the decline in mortality from stomach cancer in Oklahoma has been a real one.

The nonwhite population of Oklahoma reported marked increases for some age groups and decreases for others. This lack of consistency in age-specific death rates for gastric cancer among the nonwhites is difficult to interpret and improvement in diagnosis and the small number of deaths are the most

Table 3  
Mean Average Annual Age-Adjusted Death Rates by Sex of White  
Population and Degree of Urbanization for Oklahoma  
Counties, 1956-1965

Cancer Site	Sex	Degree of Urbanization			Kruskal Wallis Test Chi Square Value
		Metropolitan Mean	Nonmetropolitan Mean	Rural Mean	
Stomach (ISC 151)	Male	12.8	13.3	12.0	5.77
	Female	6.1	7.1	7.8	6.92*
Large Intestine & Rectum (ISC 153-4)	Male	16.3	16.1	16.4	5.67
	Female	17.5	17.0	17.4	5.92
Liver (ISC 155-6)	Male	6.6	6.9	5.4	7.78*
	Female	5.2	6.0	5.2	10.10**
Pancreas (ISC 157)	Male	10.2	9.7	8.7	6.35*
	Female	6.2	5.5	5.3	7.60**

Chi Square Values

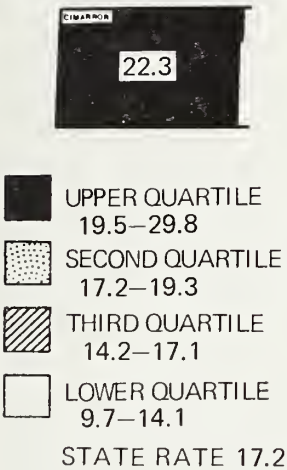
\*\*\* p < 0.001

\*\* p < 0.01

\* p < 0.05



Rates Per 100,000 Population



5. Average Annual Age-Adjusted Death Rates for Cancer of the Large Intestine and Rectum (ISC 153-154), White Females.

likely causes of this inconsistency in secular trends.

Several epidemiologists have speculated that changes in dietary habits may account for the decrease in gastric cancer mortality. It is difficult to assess such influence on the change in secular trends within the framework of this study.

*SEX DIFFERENCES:* The Oklahoma male experienced higher adjusted mortality for cancer of the esophagus, stomach, and pancreas than the female. Cancers of the liver, small intestine, large intestine and rectum are almost equally distributed between males and females in Oklahoma as in other parts of the United States.<sup>27,28</sup>

In attempting to explain these sex differences it was suggested by Lilienfeld<sup>27</sup> that three hypotheses are possible. One hypothesis states that males are more exposed to external factors. Another hypothesis explains the difference on a genetic basis such as males have an increased predisposition to certain cancers with exposure being the same for both males and females. A third possibility is an interaction of both environmental and genetic factors favoring an increase of certain cancers in the males. He

also noted that cancer sites occurring with an increasing frequency among males are those in the upper end of the respiratory and digestive tracts. It would be reasonable to attribute the excessive mortality from cancer of the esophagus among Oklahoma males to any one of the three possibilities. An association between alcohol consumption and cancer of the esophagus has been established.<sup>27</sup>

*RACIAL DIFFERENCES:* The age-adjusted death rates for cancer of the esophagus, small intestine and peritoneum among the nonwhite male and cancer of the stomach and liver among both nonwhite males and females were higher than among their white counterpart. Mortality rates from cancer of the large intestine and pancreas showed no consistent race differences.

It is difficult to interpret these age-adjusted differences as the nonwhite population of Oklahoma is not homogeneous and constitutes two different racial groups, the Negroes and Indians. It is reasonable to assume that the availability of medical care for the two racial groups is not the same nor is it similar to that for the white population. Other factors must be considered here as



the genetic constitution of the two racial groups is not alike nor is the diet, the personal habits or socioeconomic and hygienic standards. We shall refrain from drawing any conclusions from these data.

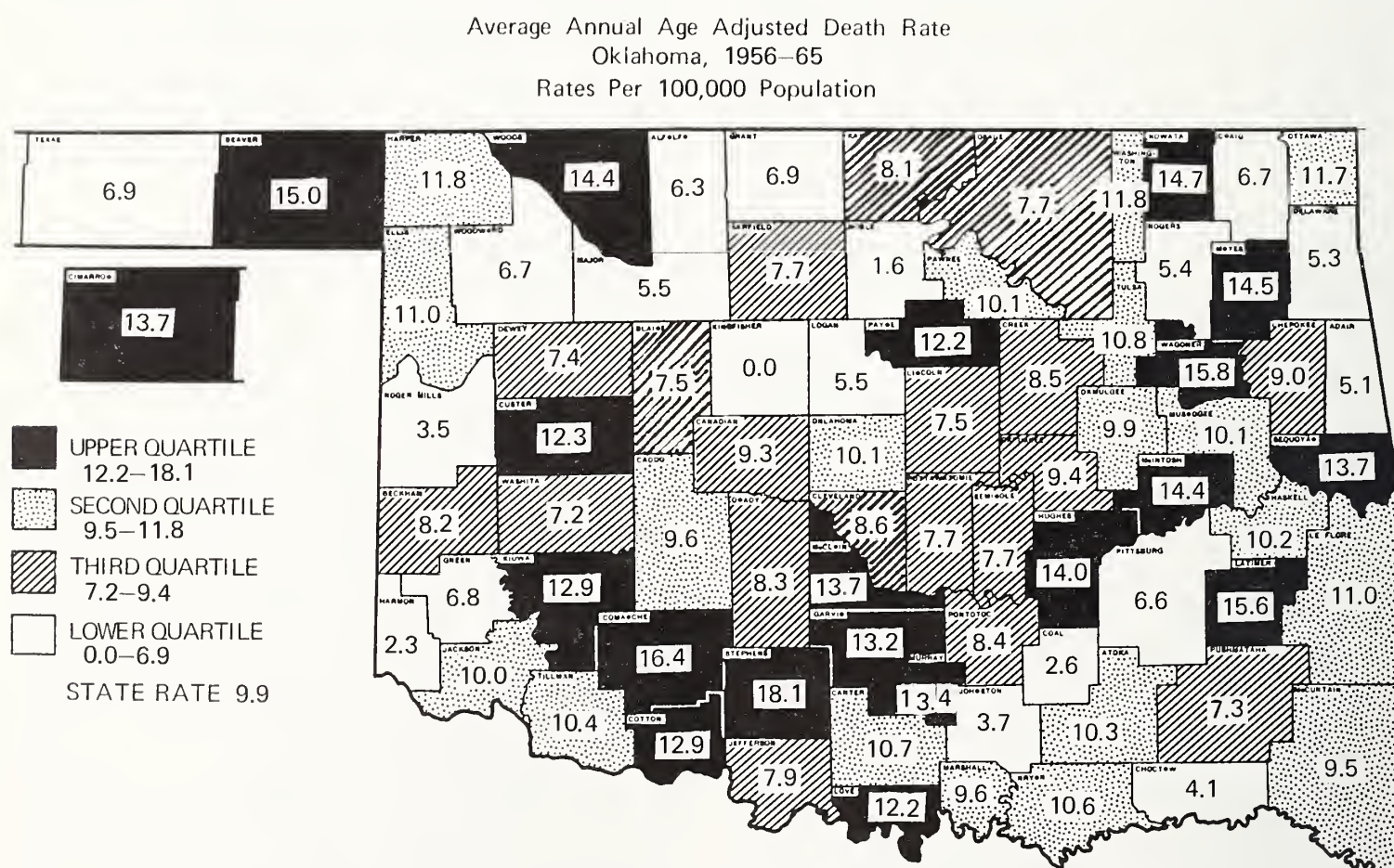
**GEOGRAPHIC VARIATIONS:** In trying to explain geographic differences in mortality, many factors in the human environment must be considered. For instance, the influence of factors in the industrial and social environment on mortality from malignant diseases has been established.

The mineral map of Oklahoma shows that the northwestern counties of the state are located in an area underlain by salt. This same area has the highest elevation of any area of the state and is the area where the croplands are most prevalent. It is also an area classified as rural. It is difficult to say whether the elevation, the salty soil, the farming occupation, the diet, or all of these have influenced the increase in mortality from cancer of the large intestine, rectum and stomach. Reports from Costa Rica, Chile, Japan, and Switzerland, all mountainous countries, indicate a very high mortality from gastric cancer. People engaged in farm-

ing are likely to eat a different diet than the population at large. For example, raw milk is commonly ingested by the rural population.

Another interesting influence is the socioeconomic distribution of the population. The northwestern counties of the state have all been classified as upper socioeconomic. In these areas cancer of the large intestine and rectum for both males and females appear to be more prevalent. The same is true for cancer of the stomach among the males. Liver malignancies on the other hand appear to be more prevalent in areas classified as low socioeconomic, mainly the eastern counties of the state.

One of the areas that has not been explored regards the use of insecticides by the Oklahoma farmer. The agriculture department recommends the use of certain chemicals some of which are known to be toxic (Azinphosmethyl, carbophenthion, demeton, methyl parathion, and parathion are among the many toxic insecticides used by the Oklahoma farmer). There are no data available as to how much of these chemicals are used by the farmers as the recommendation always includes a choice of more than one. The distribution of cancer of the stomach



6. Average Annual Age-Adjusted Death Rates for Cancer of the Pancreas (ISC 157), White Males.



Table 4  
Correlation By County of Average Annual Age-Adjusted  
Death Rate for Oklahoma White Males and Females  
(1956-1965)

Cancer Site	Kendall Rank Coef.	Z
Esophagus (ISC 150)	-0.00329	-0.042
Stomach (ISC 151)	0.10493	1.350
Large Intestine and Rectum (ISC 153-4)	0.16372	2.106*
Liver (ISC 155-6)	0.13096	1.685
Pancreas (ISC 157)	0.08211	1.056

and large intestine and rectum favors the rural areas of the state, the areas of greatest cropland distribution and the areas where toxic insecticides are used freely by the farmers. It is very difficult to evaluate such influence on the incidence of malignant diseases of the digestive system within the framework of this study but other studies should be conducted in the future to assess this problem.

The geographic distribution of cancer of the liver is likely to be influenced by the geographic distribution of other malignancies. The liver is an organ to which cancers of other sites frequently metastasize. Geographic differences in mortality from liver malignancies remain unexplained.

In conclusion, the trends of malignant disease of the digestive organs are consistent with those reported in other parts of the United States. The influence of the environment on mortality does not seem to be consistent for both males and females, probably due to occupational and personal habits. However, the environment seems to influence the rates of both males and females dying from cancer of the large intestine and rectum. Cancer of the large intestine and rectum seem to be prevalent for both males and females in the northwestern counties. The significant Z value of the Kendall rank correlation for both males and females suggests an influence by some factors in the human environment that have an effect on both males and females. Other personal habits such as a particular diet in excess or deficiencies may have influenced the rates of males and females in the same counties. However, since the correlation coefficient is small (0.16372) the significant Z value may be due to a large sample size (77 counties). In relation to other gastrointestinal tract malignancies, cancer of the large in-

testine and rectum is apparently influenced by the environment to a greater degree than other malignancies of the gastrointestinal tract.

SUMMARY

Mortality from cancer of the gastrointestinal tract (ISC 150-159) occurring among Oklahoma residents during 1956-1965 was analyzed. Age-sex-race specific and adjusted death rates were tabulated for 1956-1960 and 1961-1965. Average annual age-adjusted death rates were tabulated for 1956-1965 and plotted on county maps. Data on the human environment were examined in an attempt to relate secular changes and geographic differences in mortality to factors in the human environment.

The secular trends in cancer of the gastrointestinal tract mortality for Oklahoma are consistent with those reported for the rest of the United States. A dramatic decrease in cancer of stomach is indicated. The real decrease in mortality remains unexplained.

The geographic distribution of adjusted mortality rates shows cancer of the gastrointestinal tract to be more prevalent in the northwest counties of the state. This area is underlain by salt, rural, of highest elevation and inhabited by people of upper socioeconomic status.

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# Mechanism of Action of Dopamine in Endotoxin Shock

LINDA L. SHANBOUR, Ph.D.

*Endotoxin shock, so frequently encountered in clinical medicine and of which there is no accepted effective therapy, appears to undergo reversal with dopamine treatment.*

THE TYPE of circulatory failure that is better known as septic shock is a frequently fatal condition which can occur in many infectious processes. Ebert and Abernathy have pointed out the increasing importance of endotoxin shock in clinical medicine.<sup>9</sup> A uniform explanation for the underlying mechanism involved in endotoxin shock is not yet available. Therefore, it is not surprising that there is no generally accepted effective therapy for this form of shock and that the mortality rate in such cases is extremely high. Hinshaw and colleagues have been concerned with the adverse biological effects of lethal injections of endotoxin in the dog and monkey and have helped to clarify many points of question concerning the action of endotoxin in these different species.<sup>11, 18-37</sup>

Since most studies concerned with the

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mechanism of endotoxin shock have been conducted on the canine species, the results of experiments done in this animal will be discussed here, although shock in primates can be different. The development of systemic hypotension following endotoxin injection in the dog may be accounted for by decreases in total peripheral resistance<sup>12, 20, 24</sup> and cardiac output.<sup>20, 24, 59</sup> Histamine and related agents appear to influence peripheral resistance and pooling by their detrimental effects on both pre-capillary and post-capillary segments.<sup>5, 7, 25</sup> Numerous studies have been conducted to determine the effects of endotoxin on the heart during hemorrhagic and endotoxin shock.<sup>1, 8, 9, 12, 17, 44, 51</sup> Only indirect effects resulting from low blood flow and diminished tissue perfusion appear to damage cardiac tissue. In general, there is net dilatation in pre-capillary vascular segments and net constriction in post-capillary segments. The result is a decrease in total peripheral resistance and a progressive decrease in cardiac output, leading to the progressive development of systemic hypotension. In other words, the primary drop in arterial pressure, following an intravenous injection of endotoxin in dogs, can be attributed to a decrease in venous return.<sup>44, 59</sup> It has been shown further that the principal cause of drop in venous return is hepatosplanchnic pooling, resulting primarily from hepatic venous constriction.<sup>32</sup> Because of the obvious precipitation of severe shock (hypotension) by such a pooling mechanism, any pharmacologic agent capable of blocking this



action of endotoxin could be considered of major interest in the treatment of shock.

Dopamine (3-4 dihydroxyphenylethylamine) has many interesting properties. Its effect on the peripheral vasculature is apparently highly variable and species dependent. Investigators have reported that it is depressor in the guinea pig and rabbit but pressor in the cat and dog.<sup>40, 41</sup> Burn and Rand have shown that dopamine is pressor in the spinal cat but depressor in the cat anesthetized with urethane.<sup>4</sup> Large doses appear to elicit a pressor response in the dog,<sup>45</sup> while small doses exert a depressor action.<sup>14</sup> Ross and Brown studied the effects of dopamine on various vascular beds in the anesthetized cat.<sup>52</sup> They reported vasodilatation in the gastric, superior mesenteric and inferior mesenteric arteries, while vasoconstriction was observed in the hepatic and splenic arteries. In the dog, the effect of dopamine on systemic blood pressure appears to be the result of a balance between vasoconstriction in peripheral vascular beds and vasodilatation in the superior mesenteric, renal and celiac vascular beds.<sup>10</sup> Dopamine, at doses not affecting mean blood pressure, decreases renal vascular resistance and increases renal blood flow both in man and in dog.<sup>47-50</sup> Since dichloroisoproterenol, a beta adrenergic blocking agent, does not block the renal effects of dopamine, there is the possibility of a unique mode of action of dopamine on the renal bed.<sup>48</sup> Dopamine infusion in water-loaded dogs increases Na<sup>+</sup>, K<sup>+</sup> and osmolal excretion and p-aminohippurate and inulin clearances.<sup>50</sup> Dopamine is reported to have direct actions on the heart.<sup>2, 39, 46</sup> It increases mainly the cardiac output and stroke volume via a positive inotropic effect. Small doses (2-4 µg/kg) of dopamine in the dog have little or no cardiac effect and produce a slight pressor-depressor effect. Intermediate doses (8-16 µg/kg) produce an increase in heart contractile force and heart rate, and blood pressure effects are more pronounced. Higher doses (32-64 µg/kg) produce marked increments in heart contractile force, heart rate and arterial pressure.<sup>46</sup>

Preliminary clinical studies have indicated that dopamine is beneficial in patients in various shock states.<sup>13, 15, 16, 42, 43, 47, 58</sup> Mac-

Cannell, *et al.*, administered dopamine to 11 hypotensive patients, six of whom had signs of shock (post-infection, cardiogenic and neurologic). Although most of the patients had received prior medication, dopamine improved peripheral circulation and urine output in five, and an additional five showed improvement in one of these functions. Six patients, while receiving norepinephrine, epinephrine, or metaraminol, when administered dopamine, increased their urine output to greater than 80 ml per hour. Dopamine increases sodium excretion in patients with severe congestive heart failure.<sup>15</sup> Dopamine differs from other sympathomimetic amines in increasing the glomerular filtration rate and renal plasma flow<sup>47</sup> and by not increasing the circulating free fatty acids.<sup>3</sup> There have been no reports of dopamine producing bradycardia in man. Use of alpha and beta adrenergic receptor blocking agents suggests that the pressor effect of dopamine is due to both slight alpha adrenergic receptor stimulation and beta inotropic action, and its vasodilating action is due to stimulation of beta adrenergic receptors.<sup>6</sup>

Our laboratory has been primarily concerned with exploring the actions of dopamine on the peripheral circulation of (*Escherichia coli*) endotoxin-shocked dogs, with special emphasis on its possible effects in altering venous return by obliterating intra- or extravascular pooling.<sup>38, 53-57</sup>

In order to study the effects of dopamine specifically on the peripheral circulation, one series of studies was carried out on 31 adult mongrel dogs using the venous return preparation.<sup>24, 59</sup> Dopamine infusion at low rates (7 µg/kg/min) tended to decrease the mean systemic arterial pressure, reservoir volume, heart rate, and total peripheral resistance, with very little effect on the magnitude of the pulse pressure. At higher doses (17 and 34 µg/kg/min) there were increases in all of the above parameters. Dopamine prevented the pooling of blood in the animal which typically follows endotoxin injection in the dog. There was no significant difference in mean systemic arterial pressure between the untreated (received endotoxin only) and the treated (received endotoxin and dopamine infusion) groups. Dopamine obviated the post-endotoxin bradycardia. Results were similar when dopamine was given as pre-



treatment or as post-treatment.

Since one of the major factors responsible for the decrease in venous return in endotoxin shock in the dog is pooling of blood in the liver, a series of experiments (ten animals) was conducted to determine the effects of dopamine on the isolated, perfused liver preparation. Results showed that the large increase in liver volume usually seen after endotoxin administration is entirely prevented with dopamine infusion; liver volume decreased markedly during the dopamine infusion prior to endotoxin administration and continued to decrease, but at a slower rate, following endotoxin. The changes were so marked that they could be observed visually. In addition, the dopamine produced hepatic artery constriction. Although these findings are of a preliminary nature, they mark the first experimental demonstration of a beneficial action of dopamine in shock by prevention of peripheral pooling and subsequent maintenance of cardiac output.

Survival studies, consisting of 12 intact, non-perfused dogs pre-treated and infused with dopamine, suggest a survival benefit from dopamine since a greater percentage of treated animals survived (50 percent vs 17 percent). Mean arterial pressure, central venous pressure, heart rate, and venous pH were relatively well maintained in the dopamine-infused animals.

In summary, dopamine infusion is very effective in preventing the peripheral pooling that occurs after endotoxin injection; however, its effectiveness is much more striking when administered as pre-treatment and continued during the post-endotoxin pe-

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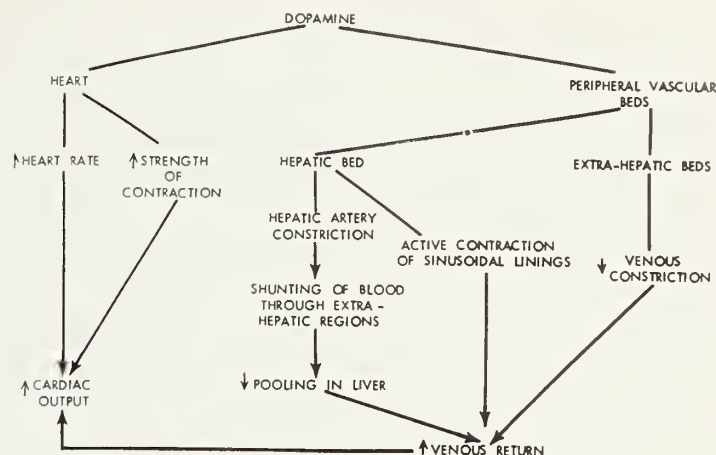


Figure 1. Suggested mechanism of action of dopamine in endotoxin shock.

riod. The hepatosplanchnic region appears to be the site of action of dopamine in preventing pooling, since the weight of the isolated perfused liver and portal vein pressure are markedly reduced in endotoxin shock when dopamine is infused. In addition, pooling in the eviscerated dog given endotoxin is not altered by dopamine infusion in experiments utilizing a venous return preparation with constant cardiac inflow (unpublished results from this laboratory).

Figure 1 illustrates a suggested mechanism of action of dopamine in endotoxin shock. The chronotropic and inotropic effects on the heart would increase the cardiac output. Actions on the hepatic bed would include hepatic artery constriction which would result in shunting of blood through extrahepatic regions, decreasing the amount of blood pooled in the liver. In order to account for the massive release of blood from the liver with dopamine, active contraction of the sinusoidal linings of the liver should be taken into consideration. The decreased pooling in the liver and active contraction of the sinusoidal linings would increase venous return. In extrahepatic beds, there is possibly a decreased venous constriction, also producing an increase in venous return, that in turn can enhance cardiac output.

It should be pointed out that, although dopamine appears to have potential therapeutic value in various shock states, it is still under experimental investigation. □

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# Tumor Clinic Proceedings

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The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radio Therapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

CASE No. 23: Osteogenic Sarcoma of the Humerus in a 16-Year-Old Boy

PRESENTATION: The patient today is a 16 year old boy who was well until approximately two months ago, at which time he developed some left shoulder pain. He was seen by his local physician, who told him that it was bursitis. Approximately three weeks ago he was seen by an orthopedist, and at that time he had developed a mass in the left upper arm. An x-ray obtained at that time revealed some periosteal elevation and a destructive lesion in the left humerus. A biopsy was obtained and although the pathologist was not certain of the diagnosis, he felt that it was an osteogenic sarcoma. The patient was then referred to the University Medical Center. A review of the slides confirmed the diagnosis of osteogenic sarcoma. Physical examination at this time is essentially unremarkable, except for the swelling in the left upper arm with some tenderness. Laboratory studies revealed an alkaline phosphatase of 17 King Armstrong Units, with the normal being 16. A chest x-ray was essentially normal.

DOCTOR CONDIT: Any questions about this patient? Doctor Bogardus, would you like to discuss the management of this case?

DOCTOR BOGARDUS: Yes. This is a very difficult problem in management. If the patient had metastatic disease at the present time then radiation therapy would be our



only choice of treatment. Many of these patients already have metastases even though our current studies do not demonstrate them. The other choice is amputation of the arm now. Third possibility is to treat the primary lesion with radiation therapy and obtain frequent chest films to determine whether he develops metastases. If at the end of the radiation therapy he has not developed metastases, we might consider amputation. If he does show metastases, then we have saved him the trauma of a fore-quarter amputation. It is felt by most radiation therapists that once you initiate radiation therapy of these tumors the chances of the lesion metastasizing are much less. Thus, any lesions that develop during the period of radiation therapy were probably present prior to the institution of x-ray therapy. Another alternative is to amputate at this time. Some people have treated such patients with small doses of pre-operative radiation therapy in an attempt to improve the survival rate. If you are going to amputate immediately, there appears to me very little point in treating it at all. This is not like some other situations where you are working directly with the tumor and may liberate tumor cells. Here you will be able to ligate the blood supply immediately, and thus eliminate possible metastases during the operation. Dr. Evans, how does your service feel about the treatment of this lesion?

DOCTOR EVANS: It appears to us that the only chance for a cure of this lesion is a fore-quarter amputation with or without pre-operative radiation therapy. If he had metastases the amputation would be less valuable in terms of being a curative procedure. Occasionally the surgical removal of isolated lung metastases has been successful. A recent review of the therapy of osteogenic sarcoma from the University of Michigan Medical Center (J.A.M.A. 208:2439, 1969) reported that there were no male survivors with osteogenic sarcoma in cases with an open epiphysis. This report differs from that of the Mayo Clinic (J. Bone & Joint Surg. 49A:101, 1969) in which they reported several long-term survivors.

DOCTOR CONDIT: You mean they felt that an open epiphysis gave a much worse

prognosis.

DOCTOR EVANS: Yes. They felt that this was of prognostic significance. In females it was not related. Their explanation for this was that in the same age group, the females close the epiphyses earlier than the male. They also reported 13 long-term survivals of from 5¼ to 35 years. The one common finding in all of the long-term survivors was that they had an amputation at some time during the course of their treatment. For this reason we feel that an amputation gives this patient his best chance for a cure.

DOCTOR CONDIT: Doctor Bogardus, do you have any further comments about radiation therapy?

DOCTOR BOGARDUS: If the patient already had metastatic disease, it would still be possible to treat his arm to approximately 8,000 to 9,000 rads over a period of eight to ten weeks for palliation of the primary lesion. We have at least two cases in which we have completely controlled the primary tumor, one of which has metastatic disease and one of which is free of disease.

DOCTOR CONDIT: In regard to chemotherapy, the chances of a response to the drugs currently available are not very great. We have treated a few of these patients with several different drugs and while some of them have shown improvement with such drugs as Methotrexate and a combination of Actinomycin D and vincristine, in general, there have not been any long-term remissions of their disease. Doctor Bogardus, are there any diagnostic studies which might help to pick up metastases other than the routine x-ray studies?

DOCTOR BOGARDUS: The lesions may pick up radioactive strontium if they are laying down new bone, which many of them will. While this might be useful in terms of picking up metastases, it would not be a very effective way to treat the lesions, as they would not pick up enough strontium to give the tumor a very large dose of radiation.

FINAL DIAGNOSIS: Osteogenic sarcoma of the left humerus.

TUMOR CLINIC RECOMMENDATIONS: The chances that this lesion can be cured are quite small. Two possible therapeutic approaches could be taken: (1) Immediate fore-quarter amputation even though the chances of cure are small. (2) High dose



radiation therapy to the primary lesion with the possibility of amputation if the patient does not develop pulmonary metastases. The choice of therapy is to be determined by the managing service.

CASE NO. 24: Familial Fibrous Dysplasia of the Mandible

PRESENTATION: The patient is a 19 year old white female who was first seen in our office in July, 1962. X-rays indicated changes in the symphysis of the mandible and in the maxilla. There were impacted teeth in both the upper and lower jaw. It was decided to remove the impacted teeth and biopsy the bone lesions. The original biopsy of the mandible and maxilla indicated fibrous dysplasia. In 1965, an orthopedist who was following the patient reported a lesion in the distal left tibia. No specific treatment was given for this lesion. In 1966, the patient had reached her full growth. The area in the symphysis of the mandible enlarged and the maxillary lesion remained unchanged. Intra-oral shaping of the symphysis of the mandible was done in May, 1966, to allow the patient to wear a satisfactory partial denture. Histopathological report of a biopsy obtained at this procedure indicated a mixed odontoma of the mandible. In December, 1966, a breast biopsy was done, which was reported as a benign fibroadenoma. The tibial lesion was x-rayed again in 1967, and showed no change. Earlier this year the lower right side of the mandible was x-rayed and showed continued growth of the lesion. There was no loss of sensation in the inferior, alveolar or mental branches of the trigeminal nerve. Intra-oral shaping was performed on the symphysis again in April, 1968. Physical evaluation at that time showed nothing associated systemically with the mandibular lesion and the histopathological report indicated fibrosing cementoma of the mandible with no evidence of malignant change.

This patient's family history is very striking. The patient's cousin age 22, has been followed in our office for 8 years prior to this time with similar areas in the symphysis of the mandible. The oldest member of the family we have seen was the patient's great aunt. We have been following her since 1951, and she has a similar condition of both the mandible and maxilla. The patient's father has a similar condition of the mandible,

and had all of his teeth removed in 1958. The patient is presented for discussion of this rather interesting problem and consideration of possible therapy of this lesion.

DOCTOR CONDIT: Doctor Hirschi, what are the chances that this lesion might become malignant?

DOCTOR HIRSCHI: I have never seen one which has become malignant; however, it is possible that following irradiation they can show a change. This tumor has never been irradiated.

DOCTOR CONDIT: What do you feel the therapy of this lesion should be?

DOCTOR HIRSCHI: I feel the best procedure probably would be to continue the contour procedures as needed. Also, it would be very interesting to study this family from a genetic standpoint.

DOCTOR CONDIT: Doctor Williams, what do you think about the long-term management of this patient?

DOCTOR WILLIAMS: I have not seen this patient before. I think it depends upon how much of a problem the lesion presents. I know of no reason why this large mass could not be excised. There is no normal bone left there apparently. It would be possible to do a wide removal of the lesion and bone grafting with bone chips.

DOCTOR CONDIT: Doctor Snow, do you have any comments to add?

DOCTOR SNOW: Of the two possible courses, I think that continued sculpturing of the lesion to maintain cosmetic appearance and also permit the use of dentures, would be the best thing to do at this time. I don't think that it would really be helpful to replace this lesion with new bone, that is, with grafted bone. When the sculpturing is done you don't ordinarily create an unstable situation. The tissue that is left goes ahead and behaves pretty satisfactorily as bone.

DOCTOR CONDIT: I may have missed part of the history, but I get the impression from the presentation that these tumors, as they continue to grow, eventually begin to drain. Is this correct?

DOCTOR HIRSCHI: Yes. When the patients are past puberty and in the third or fourth decade of life, they tend to ulcerate and can drain.

DOCTOR REICHMANN: Another problem that can occur with these patients is



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that while the lesion is open following an extraction it can become infected and begin to drain. Actually, one of my patients was diagnosed pathologically to show osteomyelitis.

DOCTOR CONDIT: This is usually not a serious problem, I take it?

DOCTOR REICHMANN: These areas usually heal well after surgery.

DOCTOR CONDIT: Doctor Bogardus, do you have any comments about radiation therapy of these lesions?

DOCTOR BOGARDUS: The only comment I have on this subject is that these lesions are benign lesions, and we do not normally treat benign lesions with radiation. They behave as normal bone in their response to radiation therapy, and you just don't do much to normal bone when you treat it. As to the instances of malignancies following treatment, this has been mentioned not only in this disease but for giant cell tumors and other bone lesions of a relatively benign nature that have been irradiated. Whether this is because the patient survives for a longer time following irradiation or whether the radiation actually accelerates the production of a malignancy, I don't think anybody can say.

DOCTOR REICHMANN: I don't think that it affects our discussion, but another patient with a similar lesion had a mammary gland carcinoma removed approximately one and one-half years ago.

DOCTOR WILLIAMS: The other patient also had a fibroadenoma of the breast. Is there a strong family history of breast cancer in these patients?

DOCTOR REICHMANN: No, not that I know of.

DOCTOR CONDIT: Doctor Bottomley, would you care to comment on the genetic aspects of this lesion?

DOCTOR BOTTOMLEY: There are

several different genetic disorders associated with increased incidence of malignancy and benign tumors. Of course, multiple neurofibromatosis (von Recklinghausen's Disease) is one of the best known of these. Another one, which we have recently been studying is the so-called basal cell nevus syndrome, which may also be associated with benign bone lesions. Recently, we have followed a family here at the Oklahoma Medical Research Foundation with multiple different types of malignancies, including acute leukemia and various types of sarcoma. Another type of familial malignancy, xeroderma pigmentosum, is a condition in which the skin is extremely sensitive to ultraviolet light. These patients develop skin cancer at a very early age. This lesion has been found to be associated with a defect in a DNA repair mechanism which ordinarily is capable of repairing the damage to DNA done by ultraviolet light. This is one of the few genetic disorders in which the etiology of the increased susceptibility to neoplasia has been worked out. We would be very happy to do some chromosome analyses on this particular family, although the chances of finding anything are very small.

DOCTOR CONDIT: I would like to thank Doctor Hirschi and Doctor Reichmann for bringing to our attention this interesting condition. This is an unusual lesion that we do not see very often.

*FINAL DIAGNOSIS:* Familial fibrous dysplasia of the mandible.

*TUMOR CLINIC RECOMMENDATIONS:* It was felt that the lesion should be handled by continued sculpturing operations as necessary to maintain an acceptable cosmetic appearance and the use of a functional denture. It was also suggested that surgical excision could be carried out if the sculpturing procedures were not able to control the lesion or if it showed any change in its apparent benign status. □



# Origin of An "Official Organ" The Journal of the Oklahoma State Medical Association

CATHERINE BIELSTEIN

*An appreciative view of early endeavors in medical journalism in Oklahoma — endeavors sometimes competitive and confusing but always vigorous.*

IN HIS "President's Address" to the Oklahoma State Medical Association in May 1908, E. S. Bobo, M.D.,<sup>1</sup> was "glad to state . . . a Journal is no longer a matter of conjecture."<sup>1</sup> Ending any doubts concerning its existence, the first issue of the *Journal of the Oklahoma State Medical Association* appeared the following month. Now, in 1969, the publication is in its 62nd year, nine physicians have served as editors, and 2,125 association members support it.<sup>2</sup>

Proliferation of literature and competition for the reader's attention were not the problems in 1908 that they are now,<sup>3</sup> but competition on a small scale was a problem of the *Journal* in the year of its founding. There

Work done in the preparation of this paper was for Library Science 313 (Medical Librarianship), University of Oklahoma, spring 1969. The course instructor was Mr. Leonard Eddy, Associate Professor of Medical Library Science and Librarian at the University of Oklahoma School of Medicine. The suggestions for research of both Mr. Eddy and Doctor R. Palmer Howard, Professor of History of Medicine in the Department of Medicine, University of Oklahoma School of Medicine, are appreciated.

was even confusion within the state association itself as to whether it WAS the official organ of that body.<sup>4</sup>

Some knowledge of the historical setting contributes to the understanding of that confusion and to the understanding of the *Journal's* development over the years. The purpose of this paper is to record some of that background information and history of the *Journal* itself. Material includes that which seems relevant or revealing and some which is of no particular significance but is of human interest.

Medical organizations, as well as medical publications, existed in Oklahoma prior to the founding of the present state association. The Indian Territory Medical Association began in 1881 at Muskogee,<sup>5</sup> the Oklahoma Territory Medical Association in Oklahoma City in May 1893.<sup>6</sup> By amendment to its constitution in 1902, the latter changed its name to that of the Oklahoma State Medical Society. When it reorganized in 1904, the society, although still a territorial body, adopted the name "Oklahoma State Medical Association."<sup>7</sup> This was the name assumed by the organization formed by the amalgamation of the two territorial medical associations in 1906,<sup>8</sup> a year before Oklahoma became a state. Anticipating statehood for the territories and realizing that changes in



legislation would be necessary for the regulation of their profession, "the physicians of Oklahoma, like the members of other professions . . . were anxious to be professionally organized."<sup>9</sup>

An early supporter of the profession and its organizations was the *Oklahoma Medical Journal*, founded in January 1893 at Guthrie, Oklahoma Territory, by three physicians: Joseph Pinquard, H. P. Halsted, and Eugene O. Barker.<sup>10</sup> In its first issue, the journal emphasized the importance of having such a publication: "The need of a Journal is felt in Oklahoma Territory at the present time as there is a most wonderful disorganized condition of the medical fraternity."<sup>11</sup>

Perhaps because of this "wonderful disorganized condition," a further need — one for a territorial medical association — was brought out in an editorial in the March 1893 issue:

"Is it not about time for the Doctors of this Territory or organize a Territorial Medical Society? Every State and Territory except Oklahoma has a successful medical society, and Oklahoma with 300 or more physicians without a Territorial Society is behind the times."<sup>12</sup>

In April a call to organize was published, and in May, 34 physicians met in Oklahoma City, organizing the Oklahoma Territory Medical Association. The *Oklahoma Medical Journal* carried an account of the meeting as well as the information that it was the official journal of the association.<sup>6</sup> (pp. 49-51)

In its monthly issues the journal published two or three original articles of medical interest, extracts of articles from other publications, news of the association, and brief items concerning activities of its members. Advertising was limited to four or five pages and usually consisted of professional notices and advertisements of Guthrie druggists. Doctors were urged to contribute, for "no article, it appears not how well written, is of interest to every reader; but every article will be of interest to someone."<sup>13</sup>

The journal further encouraged physicians to take part in the November 2-3 meeting at El Reno:

"The programme, which will be found in this issue of the Journal, indicates a good meeting; and we believe it will abundantly repay every doctor in the Territory for the time expended should he attend this meeting. Even though he meets no one

who knows more than himself, the association with his medical brothers throughout the Territory broadens his view and makes him feel better satisfied with himself. . . . It is true, and said 'tis true that physicians as a class are very unsocial, when it comes to discussing medical questions, with their immediate opponents. One old medical man in Guthrie, said to me the other day, that during his many months' residence in the city, and his many meetings with the physicians in the city; that with one or two exceptions they all avoided any reference to medical topics in their conversation, and seemed as though they were afraid they would give away some points that they alone knew."<sup>14</sup>

In January 1894 an editorial announced that ". . . a change has been made in the management of this Journal whereby Doctors Pinquard and Halsted retire, and Doctor Barker assumes entire control of the editorial department."<sup>15</sup> Doctor Barker continued to publish the *Oklahoma Medical Journal* through its ninth year (1901), selling it then to J. R. Phelan, M.D., publisher of the *Oklahoma Medical News*.<sup>16</sup> The latter journal, carrying the subtitle *A Monthly Periodical Devoted to Medical Science*, was first published in 1901.<sup>17</sup> Its yearly subscription rate was one dollar.

Doctor Phelan's publication supported membership in medical organizations also, and in the October 1901 issue an editorial "A Twice Told Tale" emphasized the importance of county societies. Physicians were reminded that membership in the American Medical Association was contingent upon affiliation with a state or territorial association which, in turn, required that a physician must first be a member of a county society. Benefits from each membership and attendance at the monthly two hour meeting might be the promotion of harmony, learning of the latest progress in medical science, and obtaining information pertaining to the determination of fees. "Then again," the editorial writer continued, "the meeting could be a period of recreation, and no one, not even his own patients, would begrudge the busy practitioner a short respite from his arduous labors."<sup>18</sup>

Among the contents listed on the cover of this same issue of the *Oklahoma Medical News* were six articles of medical interest, "Notes and Items" and "Medical Jurisprudence"—a regular feature of the publication. Four pages carried advertisements such as "Fellows Syrup of Hypophosphites . . . for



the Oncome of Age" and that of the Washburn-Lytle Implement Company "opposite the post office," offering fine harness for sale. In "Medical Jurisprudence," William Albert Smith of the Oklahoma City Bar discussed the right of the physician to determine the number of his house calls and whether a patient had the right to refuse to pay a bill if he considered the calls too numerous.<sup>19</sup>

In the December 1901 issue Oklahoma county physicians were commended for their intentions to organize, and an article concerning the autumn meeting was carried. Appearing also were remarks congratulating the *Oklahoma Medical News* on its founding, remarks reprinted from other journals—the *Denver Medical Times*, the *Southern Clinic*, the *Texas Medical Journal*, and the following from *Medical Dial*: "Oklahoma is coming to the front as a wide-awake section of the country, and for the unique distinction of being more quickly developed with an intelligent class of citizens than any other part of the United States."<sup>20</sup>

When, in January 1902, the *Oklahoma Medical Journal*, volume 1, and the *Oklahoma Medical News*, volume 9, were continued as volume 10 of the *Oklahoma Medical News-Journal*, the owner Doctor Phelan continued to be the editor.<sup>16</sup> The following staff was announced: A. D. Young, M.D., associate editor; J. E. Brewer, general manager; C. A. Phelan, business manager; and W. E. Dickens, M.D., J. R. Hammill, M.D., and Ira B. Bartle, M.D., collaborators. It was further stated that "with the intention of producing the best medical periodical in the southwest, the publishers . . . have consolidated the two publications under the name *Oklahoma Medical News-Journal*. The objectionable features of each have been eliminated and the worthy ones retained."<sup>21</sup>

The newly-named publication carried the notice that it was the "Official Organ of the Oklahoma Medical Association" and that it could be bought for "One Dollar a year—Single Copy ten cents."<sup>22</sup> To those physicians who would subscribe for a year, it was promised that "We will present ABSOLUTELY FREE one of those accurate One Minute Clinical Thermometers!"<sup>23</sup>

In February an editorial urged physicians to attend the spring session: "Now, as all

minor societies consider the territorial organization their guiding star, it behooves the officers and members of the latter to have each session a grand success, less some of the minor lights outshine in brilliancy."<sup>24</sup> Succeeding issues of the *News-Journal* published news of the association and the organization of new county societies. Inquiries concerning a medical school and the shortage of physicians were dealt with in one sentence:

"For general information we will say that the 'College' is still in the 'bud' and when the spring-time of its necessity is apparent it will bloom forth in full brilliancy, but at the present time we can furnish any locality, desiring a physician, with a doctor from one to forty years of experience, upon short order, provided they will insure the physician against starvation."<sup>25</sup>

The subject of owning and publishing its own organ came before the Oklahoma Territorial Medical Society at its meeting in Guthrie in May 1903. Although a committee had recommended the advisability of such action, the matter was "laid over."<sup>26</sup> The proposed amendment, whereby another medical publication would be founded, was strongly protested by the *News-Journal*:

"More than ten years ago was established the *Oklahoma Medical Journal*. It was through the efforts of this journal and its editor . . . that the Oklahoma Territorial Association (now the Oklahoma Medical Society) was organized. The *Oklahoma Medical Journal* was rightfully adopted the official organ. Said journal has since been incorporated with the *Oklahoma Medical News*, forming the present *Oklahoma Medical News-Journal*. By virtue of which this *Journal* is the present official organ of the Society. Is it not?"<sup>27</sup>

Whether this argument of Doctor Phelan's editorial was responsible for the society's action is unknown to the writer, but the amendment was not approved. A. L. Blesh, M.D., president of the Oklahoma Medical

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*Catherine Bielstein received her BA degree from Southern Methodist University in 1939; was certified as a school librarian in 1968 and awarded her Master of Library Science (MLS) from the University of Oklahoma in 1969. She is presently librarian at Central Junior High School in Oklahoma City.*

*Mrs. Bielstein is the widow of the late C. M. Bielstein, M.D., Oklahoma City pediatrician.*



## "Official Organ" / BIELSTEIN

Society in 1903 and 1904, became an assistant editor in May 1904 and stated in an editorial, "I am connecting myself with the *News-Journal* for this one purpose—to add my little mite toward the thorough organization of the reputable elements of the profession in this territory."<sup>28</sup>

While physicians were becoming increasingly aware of their professional responsibilities and the need of enlarging their areas of influence, other growth in the territories was taking place. Of no surprise to today's readers is this news item appearing in the August 1904 issue: "St. Anthony's Hospital at Oklahoma City is erecting a large addition."<sup>29</sup> And in early 1905 an editorial concerned with the passage of medical legislation urged each doctor to "... forget for the time being that he is a Republican, Democrat, Populist or Socialist, remembering only that he is a physician."<sup>30</sup>

The Oklahoma State Medical Association [territory] reorganized late in 1904 and adopted a constitution and plan of organization suggested by the American Medical Association. The council replaced the judicial council, further carrying out the AMA standard plan for state societies. Dues were set at \$1.50, which included a subscription to the *Oklahoma Medical News-Journal*.<sup>7</sup> (pp. 154-155) At the May 1905 Association meeting, the council recommended that the contract with Doctor Phelan be renewed "... vis.—that the *Medical News-Journal* be furnished to all the members of the State Association for 50 cents a year, to be paid out of the treasury of the Association."<sup>8</sup> (pp. 6-7)

Meeting in joint session in May 1906, the territorial medical organizations voted in favor of amalgamation and officially organized the Oklahoma State Medical Association. Those elected to office were: B. F. Fortner, M.D., Vinita, president; M. A. Kelso, M.D., Enid, vice-president; and Eugene O. Barker, M.D., Guthrie, secretary-treasurer.<sup>8</sup> (p. 17) No provision was made for the publication of an association-owned journal.

The December 1906 *News-Journal* carried the information that "... at a regular meeting of the Oklahoma Medical Society in May, 1905, and the Indian Territory Society in June, 1905, a contract was made with the

*Oklahoma Medical News-Journal* to furnish the *Journal* to its members for one year. ... The contract with the societies expired last June."<sup>31</sup> However, since the new association had no "mouthpiece," another contract was made with the publication in 1907 for it to be the official organ until June 1908.<sup>32</sup>

When the association met in May 1908 in Sulphur its house of delegates accepted a committee's report establishing a journal "to be known as the *Journal of the Oklahoma State Medical Association*, the first issue to come out about June 1, and the secretary, Doctor E. O. Barker, shall edit this issue under the supervision of the Council."<sup>33</sup> In assuming his responsibilities as editor of the new publication, Doctor Barker promised that "the *Journal* will be conducted along strictly ethical and proper lines . . . and it will never be used to either reward our friends or punish our enemies."<sup>34</sup>

The former "official organ" of the association, the *Oklahoma Medical News-Journal*, may not have been one of these "enemies," but relations between the two journals appear to have been strained. The *Journal's* second issue referred to an unpleasant situation which seemingly existed, and it published a "Warning":

"We take this opportunity to caution our readers and advertising patrons regarding the claims made by the *Oklahoma Medical News-Journal* . . . that it is the *Journal of the Oklahoma State Medical Association*. We are informed that the agents of the *Journal* are endeavoring to sell stock and get subscriptions and advertising, by giving out the impression that it is the *Journal* owned by the Oklahoma State Medical Association. . . . The facts are, the *News-Journal* never was the *Journal* of the Oklahoma State Medical Association but merely the official organ of the Association."<sup>32</sup>

It seems that news of the competition spread elsewhere, for the *Journal* carried a reprint from the *Chicago Clinic* which referred to the matter:

"There are warm old times down in Oklahoma, where the doctors are trying to decide what journal is the real, authentic, genuine organ of the State Medical Society. . . . The new *Journal* has gotten pretty mad about it, and after hurling all investives at the older sheet winds up stigmatizing it as 'privately owned.' War is now on!"<sup>34</sup>

While there is no more evidence of competitive claims in issues to follow, the *Journal's* editor continued to be outspoken both in criticism and in praise in matters which came to his attention. An element of each



appears in his editorial concerned with a letter received from the Wichita, Kansas, Ministerial Alliance. This letter suggested raising a Thanksgiving offering of \$25,000 for the permanent endowment of the Wichita Hospital, and the letter went on to say that "we are arranging to have a Union Thanksgiving Service held in your town."<sup>35</sup> Doctor Barker quoted his reply to the letter:

"For unadulterated gall, it takes the cake. . . . There is no good reason why we should send our money out of the State or our patients either, as we have just as good accommodations both in the way of hospitals and surgery. . . . We predict that your Union Thanksgiving Service will be rather Frosty."<sup>35</sup> (pp. 176-177)

The next few months were to be Doctor Barker's last as editor. At the Association meeting in May of the next year, Clarence A. Thompson, M.D., was elected secretary-treasurer, this office being responsible at that time for editing the *Journal*. Volume 2 of the publication, now firmly established, began in June 1909. Through the work of its editors and the support of association members in succeeding years, the *Journal* has become outstanding in its field. At the 1961 State Medical Journal Conference, it was selected as the finest of 34 publications. Criteria for judging were cover design, typography, content, quality of production, and over-all impression.<sup>36</sup>

When Mark R. Johnson, M.D., became editor-in-chief in October 1968, he paid tribute to those editors who preceded him in these words:

"They joined their lives and provided the leadership, initiative, wisdom and talent which has resulted in bringing to us, in this issue and in this point in time, a medical journal which is recognized, nationwide, as one of the best."<sup>37</sup>

### APPENDIX

The following is a list of physicians who have served as editors of the *Journal of the Oklahoma State Medical Association*:

Eugene O. Barker, Guthrie	1908-1909
Claude A. Thompson, Muskogee*	1909-1933
Leonard S. Willour, McAlester	1933-1941

Lewis J. Moorman, Oklahoma City*	1941-1954
W. W. Rucks, Jr., Oklahoma City	1954 (Interim)
Ben H. Nicholson, Oklahoma City	1954-1962
C. B. Dawson*	1962-1968 (June)
Ben H. Nicholson*	1968 (June-September)
Mark R. Johnson	1968 (October)-

\*The deaths of these physicians occurred while in office. □

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## "Rubella Sunday" February 1st

"Rub Out Rubella" is the slogan for Rubella Sunday scheduled February 1st. On that day clinics scattered throughout Oklahoma will be prepared to immunize children between ages one and 11 against rubella. There are almost 500,000 susceptible children in the state—the objective of the campaign is to inoculate 200,000.

Health Department and OSMA Officials fear a rubella epidemic in the Spring of 1970.

The campaign conceived and initiated by OSMA's Committee on Immunization is co-sponsored by the Oklahoma State Nurses Association, the Oklahoma Pharmaceutical Association, the Oklahoma Jaycees and the Oklahoma Department of Health in conjunction with OSMA's County Societies.

Most of Oklahoma's 77 counties have a medical coordinator appointed by County Society Presidents. It is anticipated that 200 clinics will be established across the state to dispense the vaccine. Physicians are being aided by state nurses and members of the Pharmaceutical Association who are responsible for distribution of the vaccine.

A statewide campaign is being conducted by the Oklahoma Jaycees for funds to underwrite the cost of the campaign. In addition a \$2.00 contribution will be asked of those presenting themselves for vaccination, however, no one will be turned away. The Oklahoma Society for Crippled Children is the fiscal agent and contributions are tax deductible.

A large Oklahoma City advertising agency, Lowe Runkle and Co., has donated the services of two of its public relations experts to aid in the public information effort. It is feared that unless a concerted campaign is conducted, many people will not

avail themselves of the vaccine because of the benign nature of the disease. Barbara Embree, Department of Health, is Chairman of the Information Committee which has solicited the aid of state television stations, newspapers, radios and outdoor advertisers. Information is being distributed across the state for concentration during the two weeks prior to "Rubella Sunday." Physicians are urged to encourage their patients to take the shot unless they are positive they have had rubella.

### Rubella Studies To Be Published in February

The University of Oklahoma Medical Center's Department of Pediatrics, Children's Memorial Hospital, was among the first to carry out studies of rubella vaccines. An article describing these results, *Comparative Studies of Vaccines Against Rubella*, will be published in the February issue of *The Journal*. □

The vaccine, only recently developed, is being supplied by the Phillips-Roxane Company of Ohio. Representatives of the company will be in Oklahoma for the campaign. They have agreed to assist with publicity and to accept return of unused portions of the vaccine or aid in its successful resale. In addition to the vaccine to be distributed to local clinics, large quantities will be stored in Tulsa and Oklahoma City. Governor Dewey Bartlett has offered the service of the Highway Patrol and the Oklahoma National Guard for emergency deliveries.

Doctor Armond Start, Chairman, OSMA Immunization Committee is coordinator for the statewide campaign. □



R. CRAWFORD MORRIS

### Physician Malpractice Attorney's Topic

Top defense attorney, R. Crawford Morris, will speak to the Oklahoma and Tulsa County Medical Societies in late February on the subject of physician malpractice. He will be in Oklahoma City on Tuesday, February 24th and in Tulsa the following evening.

Morris is a 1941 graduate of the Harvard Law School and is head of the Malpractice Division of the Trial Department of the Cleveland, Ohio law firm of Harter and Hadden. The firm has 75 lawyers. During his years of practice Morris has defended physicians, hospitals, and drug companies either for their insurance companies or directly for them, and is currently counsel for several of Cleveland's leading hospitals, including: University Hospital of Cleveland, St. Luke's Hospital, Fairview General Hospital, Marymount Hospital and is trial counsel for the Cleveland Clinic.

He is a prolific writer on the subject of malpractice and has served as a member and past chairman of the Malpractice and Professional Liability Committee, International Association of Insurance Counsel.

Morris' appearance in Oklahoma City and Tulsa is a portion of the continuing OSMA malpractice pre-



vention program.

In Oklahoma City he will be the guest speaker at the regular monthly meeting of the Oklahoma County Medical Society. The meeting will be held in Val Gene's, Shepherd Mall Shopping Center and will begin at 5:30 with a buffet dinner.

The Oklahoma County Medical Society has extended an invitation to physicians from other counties to attend this meeting and hear Mr. Morris. Physicians interested should contact the county society at 601 N.W. Expressway, Oklahoma City, Oklahoma 73118. Price of the meal will be \$5.00.

The following evening, Wednesday, February 25th, Morris will appear before the regular meeting of the Tulsa County Medical Society. The meeting will be held in the auditorium of the St. Francis Hospital at 8:00 p.m. Physicians from surrounding counties are invited to attend the meeting. No meal will be served.

Morris has appeared before Oklahoma medical meetings in the past. The last time he was here was in 1967 at the OSMA Annual Meeting in Tulsa. At that time he appeared on a program called "Malpractice University" and gave Oklahoma physicians his ten rules to avoid malpractice losses. In doing so he admitted that some of his rules are cynical. Morris told the assembled doctors:

- (1) "Never volunteer."
- (2) "Watch the statue of limitations." It runs out on malpractice before it runs out on a deadbeat bill.
- (3) "Don't let a patient complaining about something you have done come back." It brings the statute of limitations back into play again.
- (4) "Keep up on the latest medical strides."
- (5) "But don't keep up too much or you will be accused of experimenting."
- (6) "Get informed consent from patients for anything you do."
- (7) "Keep good records and run all the tests you should."
- (8) "Cooperate with your profession. If you find trouble, correct it without fanfare. Don't be the cause

of a suit against another doctor."

(9) "Do not be negligent."

(10) "Work on your public relations."

While Morris' rules may appear lighthearted or truisms, he is quite serious about defending doctors against unjust negligence actions. He has stated that he really does not believe many doctors are guilty of negligence. In his 23 years of defending doctors against malpractice suits, he said, "Only about five percent were justified . . . and I urged settling those." □

## Health Resources Information Center Established

Establishment of an Oklahoma Health Resources Information Center within the Department of Health Administration of the University of Oklahoma School of Health was announced recently by Doctor William E. Schottstaedt, dean of the school.

The Health Resources Information Center will serve the university, other state agencies and the public by the development of information essential for planning to meet health services needs within the state.

Initially, the center will be concerned primarily with the compilation of firm health manpower and manpower-related statistics, Doctor Schottstaedt said.

Originally a cooperative venture between the U.S. Department of Health, Education and Welfare's Bureau of Health Manpower and the OU School of Medicine, the Health Intelligence Facility became recognized nationally as a model for health manpower information. Its purpose was to develop health manpower information necessary for planning and for current training programs.

Doctor Charles M. Cameron Jr., chairman of the Department of Health Administration and an authority in the field of public health, will provide overall guidance to the new center. Norman E. Goodwin, formerly of the Air University, USAF, has been named director of the center. □

## Doctor of the Day Busy and Appreciated

The Second Session of the 32nd Oklahoma Legislature is back in session and the OSMA-AAGP co-sponsored Doctor of the Day Program is in full swing.

Operating out of a special doctor's office on the fourth floor of the capitol building, a different doctor and nurse are on duty each day that the Legislature is in session. During the early days of this session there was a run on aspirin tablets, stomach medicine and cold and flu remedies.

Members of both the House and Senate have expressed their appreciation for the services of the doctor and the nurse. Each day the House of Representatives gives a public signed and sealed citation to the medical personnel.

The doctor's office has been well equipped by donations from a number of pharmaceutical companies and physician supply houses. Melton and Company, Oklahoma Physicians Supply and Connie's Prescription Shops donated a large quantity of disposable supplies.

Twenty-one pharmaceutical companies furnished medications to be dispensed by the doctor of the day.

C. Riley Strong, M.D. coordinator of the project for both the OSMA and the Oklahoma Chapter of the American Academy of General Practice stated, "I would like to thank all of the pharmaceutical companies for their cooperation in this effort."

The following pharmaceutical companies have made donations: Ayerst Laboratories, Bristol Laboratories, Ciba Pharmaceuticals, Geigy Pharmaceuticals, Roche Laboratories, Merck, Sharpe and Dohme, Abbott Laboratories, Lederle Laboratories, Parke Davis Company, A. H. Robins Company, Smith, Kline and French Laboratories, Schering Laboratories, Warner-Chilcott Laboratories, McNeill Laboratories, Eli Lilly and Company, Pfizer Laboratories, Upjohn and Company, Wyeth Laboratories, Winthrop Laboratories, Schering Corporation, and Pitman-Moore Pharmaceuticals. □



## LEGISLATIVE DIGEST

Several bills are currently pending before the Oklahoma Legislature that would affect the practice of medicine. On January 7th the OSMA Legislative Committee met in Oklahoma City to consider the association's position on each of the bills.

Twenty-four different bills were discussed by the committee. The following is a resume and the OSMA's position on those bills considered the most important:

**House Bill 1020:** This is an act that would repeal the psychologist's licensure bill that was passed in 1965. The original licensure bill was opposed by the OSMA on the grounds that the licensure of psychologists should properly be in the hands of the medical community. There is now some concern among the psychologists' ranks that there is discrimination by the psychologist's licensing board. The author of this bill explained that there were psychologists in the state who had been refused licensure who were as qualified academically as those who were being licensed. *The OSMA took no position on this bill.*

**House Bill 1022:** This bill is commonly referred to as the Oklahoma Medical Laboratory Licensure Act. It was drafted by ten allied health organizations over a period of almost a year and establishes minimum standards for laboratories and laboratory personnel. The bill was introduced in the first session of the 32nd Legislature and has a stormy history. Members of the association have testified on numerous occasions regarding this particular legislation. *The OSMA supports this act.*

**House Bill 1033:** This is a public health bill introduced by the State Health Department that appropriates a million dollars for the operation of county, district and cooperative city-county departments of health. It provides an equitable formula for the distribution of the funds. *The OSMA supports this legislation.*

**House Bill 1143:** Amending the existing Workmen's Compensation Law,

this bill would require that upon written request an employer may provide an injured employee treatment by prayer or spiritual means. This type of amendment is common to health bills where religious groups would like to preserve the rights of their members to receive the treatment that they believe in. The Legislature has a difficult time with this type of amendment because there is generally a great deal of sympathy for a person who practices his religious beliefs. *The OSMA does not support this amendment.*

**House Bill 1144:** Commonly called the Medical Panel Amendment, this is another addition to the existing Workmen's Compensation Law. The medical panel amendment provides for a panel to be selected by the Industrial Court from a list of physicians submitted by the OSMA. The panel would provide the Industrial Court with expert testimony in situations where there is divergent medical testimony in workmen's comp cases. *The OSMA will not support the legislation this year, preferring to operate the panel on a cooperative basis with the Industrial Court.*

**House Bill 1150:** Another Workmen's Compensation amendment, this act would provide for a waiver agreement where an employee or prospective employee with a physical impairment or chronic disease could waive his compensable rights with relation to his specific health condition. Purpose of this act is to provide employment to persons with physical handicaps. The bill properly protects the employee and provides that rights can be waived only after a medical examination and upon approval by the industrial court. *The OSMA supports this bill.*

**House Bill 1203:** Providing that each child entering public school must show evidence that he has been immunized against diphtheria, pertussis, tetanus, measles, poliomyelitis, and smallpox and has received testing for tuberculosis, this bill provides exception for religious reasons and for those who would be harmed by such immunizations. The immunizations shall be certified by a licensed physician and children of

parents without means must be immunized by the state health department. This bill has passed the House of Representatives and is supported by the OSMA.

**House Bill 1357:** This legislation, if passed, will require students entering medical school to sign a contract with the State Regents for Higher Education promising to practice for two years in towns of under 6,000 population upon completion of their medical school and internship. It makes this agreement one of the requirements for acceptance of an applicant in the University of Oklahoma School of Medicine. *The OSMA opposes this legislation.*

**House Bill 1369:** This is a bill relating to insurance and, if passed, would provide that a patient whose illness is covered by insurance could select any practitioner licensed under the healing arts for treatment. It further provides that the services or procedures of such a practitioner could be performed at any hospital, doctor's office or clinic at the choice of the insured. *The OSMA opposes this legislation.*

**House Bill 1410:** If passed, this act would provide a method for the temporary hospitalization of a person suspected of needing mental treatment. It provides that the judge of the district court and a doctor of medicine or osteopathy must attest that the person is in need of mental treatment. It limits the maximum length of time that a patient could stay in a hospital after being admitted under emergency conditions to ten days. The bill contains a provision of immunity from liability for physicians committing persons under this act. *The OSMA supports this legislation.*

**House Joint Resolution 1033:** This resolution calls for a question to be submitted to the voters of the state of Oklahoma which would provide, if passed, that any hospital supported by public funds could not deny staff privileges to any member of the healing arts profession whose license by the state permits such person to use hospitals, nor could such hospitals deny any surgical privileges to those persons licensed by the state to perform surgery. This resolution



started out to allow a state question authorizing the creation of hospital districts and the sale of hospital district bonds. It was amended to include the prohibition mentioned above. *The OSMA opposes this bill as amended.*

**Senate Bill 114:** This bill would change the present organization of the state board of health to include a pharmacist and a dentist. It does not diminish the representation of physicians or enlarge the board. This bill has passed the State Senate and is currently pending in the House of Representatives. *The OSMA will support this bill so long as it remains in its present form.*

The OSMA Legislative Committee is anticipating that a number of additional bills affecting medical practice will be filed during this session. As the new bills come to light the committee will take a position on them and they will be reported in the Legislative Digest in the *OSMA Journal* and the *OSMA News*. □

## IRS Wants Physicians Reported

Any physician being paid \$600 or more by an insurance company, Medicare or Medicaid, for professional services can now expect to have his name and the total amount paid reported to the Internal Revenue Service. Citing a section of the Internal Revenue Code, the treasury department now requires the filing of an information return on any physician receiving \$600 or more in direct payments. In the past, the section of the code now being cited had not been applied to insurance companies or to the proceeds from insurance policies. The new revenue ruling holds that any payment made directly to the physician by such a program must be reported. The reports will be made only on monies paid directly to the physician. If a physician does not take assignments or the aggregate amount of money is less than \$600, it will not be reported.

The report itself is made on internal revenue forms 1099 and 1096 and is called an "information re-

turn" report. One section of the tax regulations exempts corporations from the information return ruling. This would indicate that physicians conducting their practice as a professional corporation will not have information returns filed.

This ruling also applies to the Medicaid program (Title 19 of the Social Security Act) which is operated by the Oklahoma State Welfare Department. Since Medicaid is a vendor program, all payments are made directly to physicians and there are no assignments. Therefore any physician receiving more than \$600 from Medicaid will have an information return filed on him by the Welfare Department.

Medicare intermediary carriers will file information returns only on those physicians who accept assignment.

Although the new ruling was made in late November of last year, it provided that payments made on or after January 1st, 1969 should be reported retroactively. The ruling did recognize that some payers accounting systems and procedures were not geared to retrieving the information and reporting it after the payments had already been made. In those instances the IRS will allow the information returns to be made with respect to payments beginning on or after January 1st of this year. □

## Medicare Premiums Going Up

Robert H. Finch, Secretary of Health, Education and Welfare, recently announced that the voluntary medical insurance premium which older people pay for Medicare will be \$5.30 a month for the 12-month period which begins next July 1st.

Secretary Finch noted that the present \$4 premium rate, set in December 1968, is too low to cover costs during the current premium period and that the special Medical Insurance Trust Fund is now drawing on its reserves.

He stressed that failure to increase the premium rate last December, in

accordance with advice from Social Security Administration actuaries, has made it necessary now, in effect, to promulgate two increases at once. Moreover, the depletion of the trust fund that has occurred because of the inadequate rate has made it necessary, Secretary Finch said, to provide for a somewhat higher margin of contingency than would otherwise be necessary.

About half the increase announced today—64 cents—is needed just to finance the program at the level of current operations. The other 66 cents of the \$1.30 increase in the monthly premium rate will be needed for the following purposes:

- 26 cents to cover an estimated increase of about six percent in the level of physicians' fees;

- about 12 cents to cover an estimated increase of two percent in the utilization of services under the program;

- about six cents because the \$50 deductible which a patient pays will be a smaller proportion of the total covered charges;

- the remaining 22 cents to provide a four percent margin for contingencies. This margin is needed because the estimates are based upon minimum reasonable assumptions and because the trust fund out of which this program is financed will be at a low level at the beginning of the premium period on July 1st, 1970.

The medical insurance program supplements the basic hospital insurance part of Medicare by helping to pay doctor bills and a wide variety of other medical expenses in and out of the hospital. The premiums paid by people 65 and older who are enrolled in the medical insurance part of Medicare, cover half the cost of their protection. The other half comes out of general Federal revenues. The Medicare law provides for annual review of the costs of the medical insurance program and for any necessary adjustments in the premium rate by January 1st. The law requires that the premium rate be sufficient to cover all expenses incurred during each premium period. □





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## Medicaid Fraud Regulations Issued

Regulations regarding possible fraud in state medical assistance (Medicaid) programs have been published by the Department of Health Education and Welfare. The December 17th issue of the *Federal Register* contained the new regulations.

The regulation states that any state plan for medical assistance under Title XIX of the Social Security Act must provide that the state agency will establish and maintain methods and criteria for identifying situations in which a question of fraud in the program might exist. The agency must also develop procedures for the investigation of possible prosecution of fraudulent claims.

The new regulation requires that any method of investigation must not infringe on the legal rights of persons involved and that they must be consistent with the principles recognized as affording due process of law.

The regulation also requires a statement to appear on Medicaid claim forms. The statement will become effective after April 1st of this year and must be imprinted in bold face type on all provider claim forms above the claimants' signature. The statement reads, "This is to certify that the foregoing information is true, accurate, and complete. I understand that payment and satisfaction of this claim will be from federal and state funds, and that any false claims, statements, or documents, or concealment of a material fact, may be prosecuted under applicable federal or state laws."

HEW has also instructed all state agencies handling Title XIX to establish and maintain procedures for reporting to the social and rehabilitation service of HEW each case of suspected fraud by a provider "which has been referred by the state or local agency to law enforcement officials for appropriate action."

OSMA president Doctor Hillard Denyer has written a strong protest to Secretary of HEW Finch. Denyer pointed out that the statement on the form is unnecessary since phy-

sicians know the definition of fraud, adding that "the statement is an insult to the intelligence and integrity of the profession." □

## Five Oklahomans Hold AMA Appointments

Five OSMA member physicians are serving on councils or committees of the American Medical Association. Four were reappointed to positions they had held previously while Oklahoma City pathologist Rex Kenyon, M.D., was newly appointed to serve on the AMA's Council on Legislative Activities.

Two OSMA members served dual capacities on AMA councils. Thomas C. Points, M.D., Oklahoma City, was reappointed to serve on the AMA's council on Health Manpower and the committee on Maternal and Child Care.

Dale Groom, M.D., Director of Oklahoma's Regional Medical Program, was reappointed to the AMA's Council on Scientific Assembly and was also reappointed to represent the Council on the Committee on Continuing Medical Education.

James L. Dennis, M.D., Dean and Vice-President of the OU Medical School was also reappointed to serve on the Council on Scientific Assembly.

Reappointed to serve on the AMA's Council on Occupational Health was Kieffer Davis, M.D., Bartlesville.

All appointments to councils and committees are reviewed annually by the AMA's Board of Trustees. Since there is an annual review all appointments are for one year only, but an individual may serve a maximum tenure of ten consecutive terms in any position. □

## DEATHS

ROBERT E. ROBERTS, M.D.  
1902-1969

A Stillwater physician for the past 43 years, Robert E. Roberts, M.D., died December 1st, 1969. Born in Frederick, Doctor Roberts graduated from the University of Oklahoma School of Medicine in 1926. He served as a surgeon in the European Theater during World War II and was a member of the American College of Surgeons.

C. C. GARDNER, M.D.  
1884-1969

C. C. Campbell, M.D., 85, a resident of Ponca City since 1935, died December 6th, 1969. A native of Savanna, Indian Territory, Doctor Gardner graduated from the Washington University School of Medicine in 1909. He first practiced near Atoka, Oklahoma. He served twice as president of the Southeastern Oklahoma Medical Association.

E. R. MUSICK, M.D.  
1897-1969

E. R. Musick, M.D., Emeritus Clinical Professor of Medicine at the University of Oklahoma Medical Center, died December 16th, 1969 in Oklahoma City.

Born in Edina, Missouri, Doctor Musick was graduated from Northwestern University Medical School in 1922. He took his internship at University Hospital and had been associated with the hospital since that time.

Doctor Musick had served as President of the Oklahoma City Clinical Society; as Secretary and later on the Board of Directors of the Oklahoma County Medical Society; as assistant county physician; as physician to public schools and as Oklahoma City epidemiologist. Doctor Musick was a Life Member of the American College of Physicians, a member of the Southern Medical Association and the Alpha Kappa Kappa, medical fraternity. □



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# Building Contributions Over \$30,000.00

Over \$30,000 was contributed by the OSMA membership to help their association expand the headquarters building. Altogether there were 1,025 individual physicians or groups who made contributions.

Contributions of less than \$100 were made by 923 physicians, while 102 physicians or groups contributed over \$100 each and became eligible to belong to the OSMA's Century Club. Century Club members names will appear on a bronze plaque to be displayed in the lobby of the headquarters building.

The association has received actual cash contributions of \$29,690.89 and has only \$1,090 in outstanding pledges to be collected. Total contributions were \$30,780.89.

## Century Club

Contributions to the Century Club came from throughout the state of Oklahoma with one exception. A \$115 contribution was received from J. Ted Herbelin, M.D., currently stationed in South Vietnam.

Largest contribution was \$2,305.89 received from the OSMA Woman's Auxiliary.

Other individual physician contributors to the Century Club are as follows: Frank H. Austin, M.D., Lawton; Alfred T. Baker, M.D., Durant; Harold T. Baugh, M.D., Meeker; Lewis R. Beam, M.D., Oklahoma City; William M. Benzing, Jr., M.D., Tulsa; Johnny A. Blue, M.D., Oklahoma City; George S. Bozalis, M.D., Oklahoma City; Kent Braden, M.D., Oklahoma City; Walter E. Brown, M.D., Tulsa; Lyle W. Burroughs, M.D., Oklahoma City; Ed L. Calhoun, M.D., Beaver; R. B. Carl, M.D., Oklahoma City; Andre B. Carney, M.D., Tulsa; Frank A. Clingan, M.D., Tulsa; Leon C. Combs, M.D., Shawnee; Marcus L. Cox, M.D., Oklahoma City; Curtis B. Cunningham, M.D., Clinton; Vernon D. Cushing, M.D., Oklahoma City; Francis A. Davis, M.D., Shawnee; Ollie W. Dehart, M.D., Vinita; James L. Dennis, M.D., Oklahoma City; Robert

P. Dennis, M.D., Lawton; Hillard E. Denyer, M.D., Bartlesville;

Hubert E. Doudna, M.D., Oklahoma City; Robert S. Ellis, M.D., Oklahoma City; Leroy L. Engles, M.D., Durant; Edwin Fair, M.D., Ponca City; A. C. Fina, M.D., Atoka; Glen M. Floyd, M.D., Bartlesville; Virgil Ray Forester, M.D., Oklahoma City; John T. Forsythe, M.D., Tulsa; David Fried, M.D., Hollis; George H. Garrison, M.D., Oklahoma City; L. W. Ghormley, M.D., Blackwell; James D. Green, M.D., Tulsa; Ennis M. Gullatt, M.D., Ada; Raymond F. Hain, M.D., Oklahoma City; Scott Hendren, M.D., Oklahoma City; Joseph R. Henning, M.D., Norman; J. Ted Herbelin, M.D., APO San Francisco; C. M. Hodgson, M.D., Kingfisher; Robert J. Hogue, Jr., M.D., Guthrie; F. Redding Hood, M.D., Oklahoma City; J. V. D. Hough, M.D., Oklahoma City; Joseph A. Johengen, M.D., Okmulgee; Mark R. Johnson, M.D., Oklahoma City; Maxwell A. Johnson, M.D., Tulsa; W. P. Jolly, M.D., Lawton; Philip G. Joseph, M.D., Sapulpa; David Kalbfleisch, M.D., Lawton; Joseph W. Kelso, M.D., Oklahoma City; Rex E. Kenyon, M.D., Oklahoma City; Jerold D. Kethley, M.D., Shawnee; Herbert Kravitz, M.D., Oklahoma City; Frank C. Lattimore, M.D., Kingfisher; Forrest C. Lawrence, M.D., Bartlesville; John L. LeHew, III, M.D., Guthrie; W. P. Lerblance, Jr., M.D., Hartshorne; Vernon M. Lockard, M.D., Bartlesville; James D. Loudon, M.D., Shawnee; James P. Luton, M.D., Oklahoma City;

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Contributions were received from the following physician groups: Chickasha Clinic, Chickasha; Dunn-Reynolds Urology Clinic, Oklahoma City; McBride Clinic, Oklahoma City and the Woman's Auxiliary to the Oklahoma State Medical Association. □

## Radicals Get One Million From HEW

A copyrighted story in the December issue of the *Chicago Tribune* revealed that the student health organization, known as SHO, had received more than \$1 million in federal funds during the past two years.

SHO has described itself in newsletters as "a refuge for the left of center health student activist." A recent issue of its news letter was dedicated to the memory of North Vietnamese communist leader Ho Chi-Minh. The organization received the money from the Department of Health Education and Welfare to conduct surveys of health needs in Chicago and six other cities. In its news story the *Tribune* questions the worth of the surveys and points out that they were conducted in a very unscientific manner. *The Tribune* stated that the survey report pointed out that students selected persons to be interviewed by chance and haphazardly. □



## BOOK REVIEWS

**MICRONEUROSURGERY.** By Robert W. Rand, Ph.D., M.D., professor of neurological surgery, University of California School of Medicine, Los Angeles, California. Sixteen contributors. 257 illustrations and 224 pp. Saint Louis: The C. V. Mosby Company, 1969. \$25.00.

Certain neurosurgical innovations within the last decade have aided in reducing the morbidity and mortality in this difficult specialty. These have included the use of hypotension to control intracranial bleeding and more recently, the use of the dissecting microscope which facilitates magnification and adequate illumination of difficult anatomical and pathological exposures. This surgical facility of using magnification has long been appreciated by otologists; it is surprising that neurosurgeons only recently have been interested. The center of early and continued neurosurgical interest in the use of the microscope has been Los Angeles. It is interesting to note that neurosurgeons of two medical schools (USC and UCLA) have collaborated on this effort.

Doctor Robert Rand of UCLA and 16 collaborators—as a result of a symposium studying the value of microsurgery as applied to the central and peripheral nervous system—have produced this well-illustrated, informative but expensive text. Rand has written half of the text and this has been directed to the removal of pituitary tumors and neuromas of the eighth nerve. The latter has been greatly aided by a chapter on the hearing procedures now used in the early detection of these tumors. The reviewer was disappointed in the chapter on radiology of these tumors; no attention was paid to pan-topaque myelencephalography now used by most neurosurgeons.

The text indicates the value of

magnification techniques in peripheral and cranial nerve surgery with a new approach to the surgical treatment of tic douloureux. Two chapters are devoted to microvascular surgery of the brain; one is very much impressed with this being in an experimental stage and requiring extensive research.

It is stressed to the reader that should he be interested in working with the microscope, he must spend time in the animal surgery before he embarks on a program in the operating room.

The text is recommended for neurological surgeons in all stages of maturity. Certainly it should be available for members of other surgical specialties such as ophthalmology, plastic and cardiac surgery.

The reviewer was disappointed that Kurze and Donaghy, pioneers in this field, recorded no contributions in this text.—*Robert Fisher, M.D.*

### THE PRACTICE OF REFRACTION.

By Sir Stewart Duke-Elder, President, Institute of Ophthalmology, University of London. Eighth edition. With 244 illustrations. St. Louis: The C. V. Mosby Company, 1969. \$11.75.

The eighth edition of this classic book is fully as good as previous editions. It is much more than a simple discussion of optics and the mechanics of fitting glasses, but goes deeply into all types of refractive errors and other impediments to clear vision such as abnormal extraocular muscle balance, anisometropia, aphakia, and neurosis. Subjective and objective methods of refraction are well covered and the illustrations are pertinent. The book should be in the library of every ophthalmologist. — *James E. Wise, M.D.* □

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## Dues Increase Explained

In a letter to the presidents and secretaries of all county medical societies, OSMA president Hillard Denyer has announced a state association dues increase for 1970 and has explained the action taken by the House of Delegates at its 1969 annual meeting.

The delegates raised the dues from \$75.00 to \$100.00, effective January 1st, 1970.

Denyer mentioned two basic reasons for the dues increase:

First, Denyer said, the Delegates recognized the need to expand the association's headquarters building.

The building was constructed in 1957, and in 12 years of growth serious space problems developed. More meeting rooms, more office space, more workroom space and filing capacity were cited as needs by the association president.

To finance the construction, association reserves would have to be depleted to a dangerously low level. Thus, a dues increase was felt to be necessary in order to replenish the reserves and to pay for the operational costs of larger facilities.

Secondly, Denyer said escalating activities of the association, due to social, political and economic pres-

ures — require a more generous budgeting base to work from. "The additional dues income will relieve us from the current break-even operation and permit us some flexibility to improve our effectiveness," Denyer said.

At the time the dues increase was voted, the OSMA dues were below the national average. Now, they are generally on a par with other state associations.

OSMA dues are payable on January 1st and become delinquent on March 31st. They should be paid through the county medical society secretary. AMA dues are unchanged, \$70.00 for 1970. □

## Miscellaneous Advertisements

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and efforts of our aux-  
iliary compare in some  
small way as gifts to our  
community, with those  
presented the wee Babe  
in the Manger, by the  
Wise Men, many, many  
years ago.

There is no greater way of expressing  
love than by giving of one's self as did the  
Master Physician, whose birthday we have  
just celebrated, as our own auxiliary mem-  
bers so unselfishly giving of themselves.

May the blessings of life be with each of  
you during this New Year, and the glow of  
the embers in the fireplace give you warmth,  
just at the love expressed for your fellow  
man this year and others, which is so sig-  
nificant of the teachings of the Christ  
Child who was presented to our world that  
people might love one another.

Let us begin the New Year by selling  
medical auxiliary, as so aptly stated by Mrs.  
T. E. Ross, III of Hattiesburg, Mississippi.

There is a new doctor's wife in town. In  
a small town she will be quickly known and  
invited to join the auxiliary. However, as  
towns begin to grow, and especially in met-  
ropolitan areas, it is essential to have a  
definite plan to insure her feeling wanted  
and welcomed by the group.

The approach is always important. Since

the "personal touch" means so much, it is  
desirable for the president or membership  
chairman to write a note of welcome or pay  
a visit to the new doctor's wife. The letter  
or visit could be followed by a phone call  
inviting the prospective member to attend  
the next scheduled meeting and arrange-  
ments could be made for her transportation.

Good programming speaks for itself and  
will determine, to some degree at least, the  
prospective member's interest in joining.

In trying to "sell" the doctor's wife, it  
should be brought out that for the sake of  
good public relations, joining the medical  
auxiliary can do much to supplement her  
husband's contribution in the realm of com-  
munity service.

Another "selling" factor not to be over-  
looked is the fun and friendships gained  
through auxiliary membership.

Our goal is 100 per cent membership in  
every county. This utopia cannot be attained  
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when each component auxiliary has achieved  
the three basic essentials for success:

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Interesting and informative programs,  
Challenging and worthwhile projects.

Every physician and his wife should be  
aware of the aims and achievements of the  
auxiliary and realize the very real contri-  
bution being made on behalf of the medical  
profession in community affairs.

Let's all sell medical auxiliary!!!

ZELLIE

Mrs. Virgil Ray Forester



**Proposed new regulations**, published in the *Federal Register* of December 17th, call for state agencies to set up and maintain methods of identifying and prosecuting Medicaid fraud. Starting April 1st, the regulation would require the following in bold face type on all provider claim forms above the claimants signature: "This is to certify that the foregoing information is true, accurate and complete. I understand that payment and satisfaction of this claim will be from federal and state funds, and that any false claims, statements and documents, or concealment of a material fact, may be prosecuted under applicable federal or state laws." In addition new HEW regulations are requiring that states must establish criteria for identifying possible fraudulent situations, refer them promptly to law enforcement agencies, develop methods of investigation without infringing on legal rights of individuals involved.

**Another national health insurance proposal came to light** when Senator Edward Kennedy (D-Mass.) told a Boston University medical center audience, "Our immediate goal should be the enactment of legislation . . . for a comprehensive health insurance program before the adjournment of the 91st Congress." When introducing his new program Kennedy praised the work of Walter Reuther's committee for national health insurance, but made clear his bill would differ somewhat from the program Reuther's group had been talking about. He is in favor of financing from federal general revenues and not through Social Security. An estimate of \$20 billion a year has been given for his program.

**AMA's Mediredit Plan was reaffirmed** by the AMA's House of Delegates during the Denver Clinical Convention. Mediredit would provide tax credits for persons pur-

chasing health insurance from private sources. Any family unable to purchase the insurance would have it purchased for them by the government. Proponents of other compulsory national health schemes have said they will make their plans an issue in the coming congressional elections. UAW president Walter Reuther asked the House Ways and Means Committee for extensive hearings early in the year, and Senator Ralph Yarborough (D-Tex.) has said the Senate Subcommittee on Health will hold hearings on national insurance. The administration does not favor compulsory health insurance, but has ordered studies.

**AMA Records Show 9,926 physicians in the United States** have been licensed for 50 years or more. Of these, 5,577 are still in active practice.

**The AMA—Why Belong?** That's the title of an article by Hugh H. Hussey, M.D., director of AMA's division of Scientific Activities in the December issue of *Clinical Research*. He notes that 91 percent of the members of state medical associations are regular members of the AMA and points to the participation of academicians in AMA affairs. Of the 527 physicians on AMA's standing committees, 230 are full time academicians and only 189 of the total have no faculty affiliation. For physicians who questioned the value of becoming involved, Doctor Hussey offers an invitation to visit AMA headquarters in Chicago "Without danger of brainwashing."

**Extended care facilities across the country** are becoming disenchanted with Medicare. According to Edward Walker, President of the American Nursing Home Association, hundreds of ECF operators are withdrawing or limiting their participation in the program while thousands of others are considering withdrawal. He cited incidence of retroactive denial of benefits, resulting in refusal to pay for services "prescribed in good faith by M.D.'s, rendered in good faith by providers of services and accepted in good faith by beneficiaries." Walker added that audit procedures were so "complicated and burdensome that less than 50 percent are completed for 1967."



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of the Oklahoma State Medical Association

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\*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.



THREE CHEERS and a standing ovation for our colleagues who are contributing their efforts, giving their knowledge and lending their prestige to the battle against harmful drugs. Doubtlessly they work under the great and constant pressure of many shearing forces. They can expect little glory and less gratitude. The service they render in protecting us from the disastrous effects of poorly investigated, hastily endorsed and imprudently prescribed drugs is precious. They deserve our unqualified thanks and our sincere support. As physicians, we realize that these crusaders are helping us promote the health of our patients and, in addition, are protecting our material and emotional liability by making it difficult or impossible to administer such drugs.

Beyond this point, however, these scholarly scientists and dedicated gentlemen can have no business and can render no service. Their credentials will not support the inference that they are expert or even experienced in the medical art of making patients feel better. And most patients consult physicians because they want to feel better . . . to be less tired, less nervous, less depressed or in less pain. Physicians who are not engaged in the day to day, face to face encounter with such complaints from patients cannot possibly determine which medicines or which drugs will not make a given individual feel better, stronger, calmer, healthier. To presume such an ability is a gross, unscientific exercise in nihilistic quackery, and is no less contemptible than prescribing treatments for undiagnosed conditions.

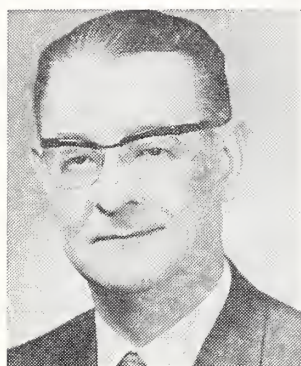
Neither can such pseudo practitioners decree that certain medications will have the same effects regardless of the route of administration. Total intolerance or lack of response to an orally administered drug which should not be but is more effective when given by injection may not make much sense to the philosophic medical logician, but neither did the relationship between a lump in the neck and lunacy make much sense to them a few dozen years ago. Theorists, like computers, may decree but they

can never succeed in the treatment of individual patients and they should not try to do so. Delusions of wisdom commonly follow a dearth of experience as many of medicines chastened heroes know. It is imperative that the admonition "First, do no harm . . ." guide us all in our ministrations and it is thus our responsibility to know what harm can come from our treatments. It is our responsibility to understand those whom we treat, the ailments we are treating and that with which we treat. This knowledge differentiates the physician from the charlatan, science from quackery.

It is *our* responsibility and it is not, nor should it be, shared by any other person or agent. Certainly no one could be more impressed with the weight of such responsibility than the person who bears it. He stands literally alone, answerable to his society for the results of all his actions. This assumption of responsibility is exactly what physicians have been trained to do. This is why their period of training is so long and meticulous. This is why the selection of students is so painstaking. This is why the supervision is so immediate. This is why the profession is proud . . . and respected; it demands training, skill and courage. Any element which erodes our responsibility will erode each of these qualities and should be resented and resisted by the total community.

When we hear that a drug may be harmful, let us listen and learn with an open, scientific mind. Let us support the effort to protect our patients from harm. Let us show respect and gratitude for the sources of such information. But let us not permit unpracticed physicians and academic scientists to tell us what will and what will not help our patients. This is what we must let our patients tell us. This is *our* responsibility . . . let us preserve it for the sake of our profession and our society. □





In recent days I have had the privilege of viewing the good works and ongoing functions of the Woman's Auxiliary to the OSMA more closely than usual. This most efficient and effectual organization has the announced and sole purpose of aiding and abetting the work of organized medicine and to augment the effectiveness of their husbands' good work. Without detracting from the many continuing projects ongoing under the direction of President Edna Dunn and her organizational chairmen and committee members, I have challenged them with another responsibility and they have accepted. This concerns the urgent necessity for improvement in our internal communication on socio-economic affairs.

The busy physician, whose average work week is well over one-third longer than any other segment of the population, finds it difficult to believe that his whole manner of rendering service could be upended in two

to five years. In addition, his manner of compensation is slated for change at the same time. Changes that seemingly should occur from generation-to-generation now are compressed to year-to-year and day-to-day.

This same busy physician also finds it hard to believe that at least two of the ten or more non-medical groups drafting legislation calling for universal compulsory health insurance are willing to risk or would welcome the collapse of the present health care delivery system.

For this and reasons continually arising, I have asked our auxiliary to singly and organizationally join in the effort to keep each member informed and armed with adequate background information necessary for medicine to present a united front. Given this information, I fear not the future. I face its challenge with eager anticipation—knowing full well that the interest of our patients will be best served—after all they are our friends for the most part and they constitute fully 98 percent of the population. No political party can make that boast—and make it stick.

Sincerely yours,

*Willard E. Denyer*



## Comparative Studies of Vaccines Against Rubella

HARRIS D. RILEY, JR., M.D.

*The group in the Department of Pediatrics, Children's Memorial Hospital, University of Oklahoma Medical Center, was among the first to carry out studies of rubella vaccines. This article describes these results.—M.R.J.*

**ALTHOUGH ITS** history encompasses more than 150 years, rubella has not been regarded as an important infectious disease until recently. In fact it was disparaged until its teratogenic effects were recognized in 1941. However, the enormous significance of rubella as a public health problem was forcefully brought home by the epidemic of 1964. This outbreak included almost two million cases of rubella in the United States and was responsible for congenital defects in an estimated 20,000 infants. Probably a similar number of fetal deaths also resulted from maternal rubella infections during this epidemic. The estimated cost of health and educational rehabilitation for each 100 sur-

vivors is estimated to be about \$2.2 billion.

The maximum incidence of rubella infection occurs during childhood, especially between five and eighteen years. However, a significant number of children escape infection and of these the females are a special risk because of the severe hazards to the fetus in future pregnancy. Serologic surveys show that rubella is endemic in most parts of the world but the incidence is extremely variable. As many as 38 percent of some young females, such as student nurses, may still be susceptible at 18 years of age. In this country the percent of persons with antibodies to rubella increases only by 14 percent (74 percent to 88 percent) between six and twenty-nine years of age. Rubella tends to occur with a six to nine year periodicity. Epidemiologists anticipate the next epidemic in this country will occur in the spring of 1970. Although acquired rubella is in itself a mild disease, the catastrophic effects to the fetus when the disease is contracted by the pregnant woman clearly justifies the efforts to develop a vaccine.

With the propagation of rubella virus in tissue culture in 1962, the possibility of the development of an attenuated rubella virus vaccine became apparent. Since that time several attempts have been made to modify the virus for the development of a satisfactory immunizing antigen. Our group at the Children's Memorial Hospital, University of

From the Department of Pediatrics and the Pediatric Pharmacology Unit, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. Some of the studies referred to were supported by grants to the Pediatric Pharmacology Unit at Children's Memorial Hospital.



Oklahoma Medical Center, has been involved in studies of several of these candidate vaccines. The purpose of this presentation is to describe the results of studies with two of these vaccines: (1) HPV-77 D-5 vaccine and (2) Cendehill vaccine (C-51).

#### METHODS AND MATERIALS

The HPV-77 D-5 vaccine was prepared from a virus recovered by Parkman and Myers from the throat of an Army recruit with clinical rubella. Attenuation was accomplished by 77 passages through African green monkey kidney cell culture (hence the abbreviation HPV meaning high passage virus) and an additional five passages through duck embryo cell culture. The C-51 vaccine was derived from virus originally isolated in green monkey kidney cells and then subjected to 51 passages in rabbit kidney cells. Only children whose parents responded to a detailed health questionnaire and gave written permission were included in the studies. In both studies, antibody determinations were carried out chiefly by the hemmagglutination-inhibition (HAI) method but occasionally by the serum neutralization technique. Virus isolation was accomplished by standard methods. Surveillance for untoward reactions was carried out for at least 30 days after start of the study in all subjects.

#### RESULTS

*HPV-77 D-5 Studies:* A total of 237 children attending day care centers were entered in an "open" type of study. The sub-

jects ranged in age from one to eleven years, but the great majority were between two and six years of age. In each day care center, equal numbers of children were assigned to vaccine and control groups. A total of 151 received HPV-77 D-5 vaccine. Of the total 237, 88 or 37 percent were initially seronegative and 147 (63 percent) seropositive.

Of 48 seronegative vaccinees who had complete antibody determinations, 47 showed a conversion to a seropositive state for a conversion rate of 97.7 percent. Of 24 seronegative controls, only one showed conversion but this was due to exposure to natural infection shortly prior to vaccination rather than due to transmission of vaccine virus. The HAI antibody titers following vaccination ranged from 1:8 to 1:256 with a geometric mean in seronegative vaccinees of 1:30.56.

There was almost no discernible difference in the incidence of fever and untoward reactions in the vaccinated and control groups or in seronegative as compared to seropositive vaccinees. In addition there was no evidence of arthritis or arthralgia in any vaccine recipient.

There has been only a slight decrease in the level of antibody titer in the two years since vaccination. During this period none of the subjects have experienced clinical rubella despite several exposures to the natural disease.

*C-51 Studies:* In the investigations of the Cendehill (C-51) strain of rubella virus a rigidly controlled "closed" study was carried out extending over a one year period. A large number of children at one of the affiliated mental retardation hospitals was serologically screened for evidence of previous rubella infection. Twenty-five seronegative boys, three to fourteen years of age residing in a cottage arrangement and whose attendants were seropositive, were selected for the study. Except for mental retardation the children were otherwise healthy. They were divided into two groups—a vaccine and a control—and each group was allowed to mingle freely with the other but both groups were housed for the duration of the study in the same cottage and not allowed contact with other children or personnel in the institution. Thirteen children were given the Cendehill vaccine and 12 served as controls.

---

*Harris D. Riley, Jr., M.D., a graduate of Vanderbilt University School of Medicine, has been certified by the American Board of Pediatrics. He is presently Professor and Head of the Department of Pediatrics at the University of Oklahoma Medical Center and Pediatrician-in-Chief at the Children's Memorial Hospital. His medical affiliations include the American Pediatric Society, The Society of Pediatric Research and the Infectious Disease Society*



Serologic Findings in Children Vaccinated With  
Cendehill Strain of Live Rubella Virus Vaccine, Lot 53/1

Number Seronegative Subjects*	GMAT** (HAI Method)							
	Days After Vaccination							
	45 Days		90 Days		180 Days		365 Days	
	Conv.	GMAT	Conv.	GMAT	Conv.	GMAT	Conv.	GMAT
13	77%	1:17	100%	1:22	100%	1:38	100%	1:30

\*12 Seronegative Controls showed no Antibody rise 65 days later  
\*\*Geometric Mean Antibody Titer

The Table depicts the serologic findings in both the vaccinees and control groups. At 45 days after vaccination ten (77 percent) of the 13 vaccinees showed an antibody rise. However, at 90, 180 and 365 days all 13 subjects exhibited a serologic conversion. Antibody titers slowly rose up to 180 days after vaccination with a slight drop at 365 days. The geometric mean HAI antibody titers were slightly lower than those observed in children following HPV-77 D-5 vaccine. None of the 12 controls residing intimately with the vaccinees showed any antibody response on the 65th day of the study indicating that vaccine virus was not transmitted. The average duration of demonstrable virus excretion from the pharynx ranges from 3.5 to 4.8 days and can be detected in as high as 81 percent of individuals. Peak shedding occurs from 14 to 15 days after vaccination but occurred as late as the 25th day. In no instance was there evidence of viral spread from the vaccinee to susceptible contacts.

As with the HPV-77 D-5 vaccine, the incidence of fever or untoward effects was comparable in the vaccinee and control groups and no reactions, including arthralgia and arthritis, which might be attributable to the vaccine were observed.

In the 19 months since vaccination, none of the vaccinated subjects have developed rubella although the natural disease has been present in the institution.

COMMENT

What are characteristics of an effective vaccine? To be clinically useful, a rubella vaccine should produce no disease or reaction after administration, induce predictable lasting immunity, be non-contagious to suscep-

ible contacts, especially pregnant women, and should be prepared in a safe and economical cell culture.

The results of these studies indicate that both of these live attenuated rubella virus vaccines, HPV-77 D-5 and C-51, are immunogenic, and are not associated with significant untoward reactions in children. Although the period of evaluation has extended only over a relatively short period of time, the antibody response appears durable and the protective effect quite solid against overt clinical infection.

On the other hand, it is quite clear that efforts to develop a more ideal immunizing antigen against rubella should be continued. Viremia has been demonstrated after the use of a form of the HPV-77 vaccine. However, in no instance has spread to susceptibles been demonstrated. The booster response following vaccination of seropositive individuals and its possible relationship to reinfection and protection against subclinical infection with virulent virus deserves further investigation. Although the presently available vaccines produce essentially no untoward effect in children, the incidence of reactions in adult women is significant. For example, arthritis and/or arthralgia occurs in only about ten percent of girls between the ages of 15 and 17 years but the incidence rises to about 40 percent in females during the third and fourth decade of life. It is clear that further studies to develop a more attenuated vaccine without loss of immunogenicity to be used in women of child-bearing age as well as investigations of the potential risk of the vaccine virus to the fetus should be continued. □

800 N.E. 13th Street, Oklahoma City, Oklahoma 73104



# Revascularization for Upper Extremity Ischemia

## CASE REPORT

RICHARD J. ALLGOOD, M.D.  
KEMPER C. LAIN, M.D.  
G. RAINEY WILLIAMS, M.D.

*Autogenous saphenous vein grafts remain patent in a high percentage of cases, even when anastomosed to a relatively small distal artery. This principle has been used in the case reported to revascularize an upper extremity in which chronic ischemia produced incapacitating symptoms.*

## INTRODUCTION

THE USE of the saphenous vein as an autogenous arterial graft has proven to be a valuable and versatile procedure in vascular surgery, and the procedure has a wide variety of applications for both acute and chronic processes. The long-term patency and functional results have been gratifying. Recently, we had the opportunity to care for a patient with severe chronic ischemia of the hand, which occurred following cardiac catheterization via a brachial arteriotomy. This report describes the successful revascularization of this patient's arm and hand utilizing the saphenous vein as a graft between the axillary and radial arteries.

A 59-year-old Causasian female with rheumatoid arthritis and compensated myxedematous congestive heart failure underwent cardiac catheterization on May 31st, 1968, approximately six months prior to admission on the Surgical Service. Six hours after catheterization via a right brachial arteriotomy, acute ischemia necessitated brachial artery thrombectomy with improvement of circulation. Over the intervening months, she slowly developed pain in the forearm and hand with intermittent claudication of the forearm. One month prior to admission, a non-healing, painful ulceration occurred on the distal tip of the right index finger.

On examination, the right hand was pale and cool. Rheumatoid arthritic deformities with ulnar deviation of the fingers of both hands were present. No pulses were palpable below the right axillary artery. Hypesthesia was noted over the lateral one-half of the forearm and fourth and fifth digits. There was a one centimeter ischemic ulceration on the tip of the right index finger.

Right retrograde percutaneous femoral aortogram, performed on November 15th, 1968, demonstrated complete occlusion of the brachial artery with filling of a small radial artery by collateral circulation (Figure 1). On November 18th, 1968, exploration of the brachial, radial, and ulnar arteries was

Department of Surgery, University of Oklahoma Medical Center, 800 N.E. 13th Street, Oklahoma City, Oklahoma 73104.



performed utilizing a transverse hockey stick incision in the antecubital fossa. The brachial artery was a fibrous cord extending down to the bifurcation. The ulnar and radial arteries were quite small, measuring two millimeters in external diameter, but arteriotomy of the radial artery revealed pulsatile blood flow. Through a small transverse axillary incision, a normally pulsating axillary artery was exposed. A bypass graft was performed, extending from the distal axillary artery to the proximal portion of the radial artery, utilizing a reversed autogenous saphenous vein. Excellent pulsatile flow was present in the graft at the termination of the procedure.

The patient's postoperative course was uncomplicated. Pulsations in the graft were always present and at one week, a faint radial pulse was palpable. The ischemic ulceration was completely healed by the end of one month. Presently, five months postoperatively, all forearm pain is gone and the patient is able to do housework without claudication. Sensation in the hand and forearm has returned to normal. Arteriography, one month postoperatively, demonstrated the graft to be widely patent with filling of the radial and interosseus arteries.

---

*Richard J. Allgood, M.D., a 1964 graduate of the University of Oklahoma, limits his practice to his specialty, general surgery. He is a member of the Alpha Omega Alpha.*

*Kemper C. Lain, M.D., graduated from the University of Oklahoma School of Medicine where he is presently taking his residency in surgery.*

*G. Rainey Williams, M.D., a 1950 graduate of Northwestern University School of Medicine, has been certified by the American Board of Thoracic and Cardiovascular Surgery. He is now Professor of Surgery at the University of Oklahoma Medical Center. Doctor Williams is a member of the Society of University Surgeons, the American College of Surgeons, the American Surgical Association, the American Association for Thoracic Surgery and the Southern Surgical Association.*



Figure 1. X-ray and drawing of a late phase in preoperative arteriography showing reconstitution of a small radial artery in the forearm.

#### DISCUSSION

This patient demonstrated incapacitating forearm ischemic symptoms due to chronic arterial occlusion from arterial catheterization. The reported incidence of occlusive complications in brachial artery catheterizations range from 0.3 percent to 65 percent.<sup>2,9</sup> Indeed, Baker, *et al.*,<sup>1</sup> feel that the rate of thrombosis is sufficiently high to warrant routine Fogarty embolectomy following brachial arteriotomy. In their series, thrombosis was found in 56 percent of arteries so explored. Fortunately, occlusion of the brachial artery usually does not result in ischemic symptoms. In those cases in which chronic ischemia is present, a surgical approach is indicated.

Autogenous saphenous veins have been utilized extensively for bypass arterial reconstruction.<sup>4, 6, 11</sup> Recent evidence indicates that autologous vein bypass grafts will remain patent in a high percentage of instances even when the distal anastomosis is to a very small patent artery. This important concept has been useful not only in the upper extremity, as illustrated in our case, but in the lower extremity, myocardium and kidney. The saphenous vein may be suitable in only 65 percent to 75 percent of patients and



a substitute must be found if the vein is unacceptable.<sup>3</sup> Synthetic materials to date appear to have a higher rate of thrombosis when used as bypass grafts in vessels the size of the brachial artery. Kakkar<sup>8</sup> recently reported on the use of the cephalic vein as a bypass graft in femoropopliteal occlusive disease. The cephalic vein, because of its proximity, may prove to be valuable in upper extremity revascularization procedures.

Herman<sup>7</sup> reported the first successful brachioradial graft in a patient with acute brachial artery thrombosis following percutaneous catheterization. Garrett, *et al.*,<sup>5</sup> reported 13 cases of elective revascularization of the arm with the cases divided approximately equally between traumatic and atherosclerotic lesions and involving mostly the brachial artery. This experience indicates that attempts at vascular reconstruction should not be discouraged when small vessel anastomosis is involved. Often, the only alternative is amputation. The use of autologous vein grafts and application of small vessel techniques, as advocated by Linton<sup>10</sup> and Stahl,<sup>12</sup> permit greater limb salvage than has been generally considered possible.

#### SUMMARY

Vascular lesions producing ischemia in the

upper extremity can occur after arterial catheterization, other types of trauma, or from a disease process such as atherosclerosis. Emphasis is placed on utilizing reversed saphenous vein grafts to revascularize ischemic upper extremities. A case report of successful revascularization of a chronically ischemic upper extremity with an axillo-radial bypass graft is presented. □

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# Newer Concepts of Hemiplegia

HERBERT KENT, M.D.

The purpose of this report is to emphasize these concepts.

## INCIDENCE

*The disabilities caused by stroke may be preventable. Early recognition today is of vital concern to all physicians. It behooves us to recognize these impending early catastrophies.*

**E**ARLIER VIEWS concerning hemiplegia should be revised as a result of newer techniques and knowledge. Since cerebral vascular disease is largely due to occlusive manifestations,<sup>1,2</sup> the pathogenesis of such lesions becomes important currently in the health and mortality of man. Likewise, the older etiological factors of hemorrhage, embolism as well as thrombosis, are becoming obsolete in terms of diagnosis, management and treatment of "stroke."

We may then ask, "How can the pre-hemiplegic patient be identified?" If, from an anatomic, pathologic, and symptomatic standpoint one can define an impending catastrophe more clearly, perhaps the outlook for a stroke patient can be improved.

Facts on stroke morbidity are readily available, although it is believed that mortality statistics do not accurately reflect the prevalence of cerebrovascular disease. In 1964, 11 percent of all deaths in the United States were due to cerebrovascular disease, and it ranked third after heart disease and cancer as a cause of death. In 1961, according to the National Health Survey, there were over 360,000 individuals with paralysis, and over 1,000,000 were known to have residual disability from cerebrovascular disease. Recently, a special report,<sup>3</sup> prepared for the National Institute of Neurological Diseases and Blindness, estimated a stroke occurrence rate of one per minute!

Hemiplegia is no respecter of ages, although it is estimated that 35 percent of the persons with strokes are under 65 years of age. On the other hand, it has been stated that the death rate from strokes can be considered to double for each decade after 65 years.

From an economic view, the cost of stroke cannot be fully or accurately assessed. We do know that directly the costs include expenditures for detection, treatment, nursing care, rehabilitation, and hospitalization. In-

Read by title at the Forty-fourth Annual Session of the American Congress of Physical Medicine and Rehabilitation in San Francisco, California, August 28-September 2, 1966.



directly, the loss to the economy of skills, services, and family support, are inestimable. In 1962, \$1.1 billion is the figure given.<sup>4</sup> Extrapolated to 1968, with the current nursing home and Medicare program, \$2 billion is a conservative estimate.

#### ANATOMY

The vascular supply of the brain is dependent on extra-cranial vessels: the common carotid and vertebral. In addition, the basilar and subclavian vessels play contributory roles in hemiplegic disease. On the whole then, these four vessels may be considered the anatomical basis for pathological mischief. Therefore, in planning a therapeutic approach before cerebral infarction, these vessels must be remembered not only to understand symptom complexes, but also to plan preventive rehabilitation, if this can be brought about effectively.

The innominate artery, as a branch coming off the arch of the aorta, forms the right subclavian and right common carotid arteries. The left subclavian and left common carotid arteries are derived directly from the arch. The vertebral arteries (right and left) develop from each subclavian artery and join at the base of the brain to form the basilar artery.

Each common carotid artery divides in the neck to form the internal carotid artery, supplying most of the brain through its middle cerebral branch and the external carotid to supply the scalp and face. Another smaller branch of the internal carotid is the anterior cerebral artery which supplies the forepart of the brain.

The basilar artery also bifurcates around the mesencephalon, into the right and left posterior cerebral arteries, supplying the posterior portion of the brain.

These vessels are linked in a network of circular arteries commonly called the Circle of Willis. In general, when vascular hemiplegia is progressing, there is adequate collateral circulation. However, as recently reported,<sup>5</sup> one must be aware that there are many anomalies of the Circle of Willis. These are significant enough to be a common finding, and can be considered a factor in

those who become victims of the underlying disease. Occlusion is probably due to a variety of coexisting diseases in the intracranial circulation. Therefore, it may be a reasonable assumption that the substrata can be modified to prevent a physiological derangement.

#### PATHOLOGY

All patients with clinical manifestations of stroke have cerebral ischemia. Most, if not all of these, have associated atherosclerotic disease. No sharp distinction is possible between the normal and abnormal vessels. Consequently, absolute prevention of stroke is a philosophical abstraction. Nevertheless, there exists a range wide enough for detecting early hemiplegia with present diagnostic methods sufficient to make efforts worthwhile.

Most clinicians agree that occlusive disease of the carotid system occurs commonly (90 percent) at two sites: at the bifurcation of the common carotid artery and at the origin of the innominate and left common carotid arteries. Angiographic studies<sup>6</sup> and autopsies have confirmed this high percentage.

At one time the middle cerebral artery was considered the common site of thrombosis. We do know that it appears to be a continuation of the parent trunk, namely the internal carotid, and runs laterally into the stem of the lateral fissure. The anterior cerebral artery on the other hand, passes medially from the internal carotid almost at a right angle. Therefore, emboli are more apt to pass into the middle cerebral than the

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anterior cerebral artery. This does not necessarily imply that thrombosis occurs more often here. Thrombosis may develop anywhere in the carotid system. If this be true, then a concept of carotid hemiplegia is more descriptive and anatomically definitive than left or right hemiplegia.

The cause of cerebral thrombosis has been said to occur most often in those patients with "atheroma"—a fatty fibrous tissue containing cholesterol clefts. Evidence has accumulated that atheromata grow by deposits of platelet thrombi which become incorporated into the wall of a vessel. The sites of these deposits, as has been stated, are most frequently found in the carotid vessels. To a lesser extent, atheromata occur in the vertebral, basilar, and subclavian arteries. When the thrombus becomes large enough the artery is occluded. If the deposits are friable and are detached, the cerebral or retinal arteries may be permanently occluded. More often only a transient ischemia occurs with minimal symptoms. Consequently, cerebral symptomatology is quite variable.

Let us examine these early presenting signs and symptoms. A suggested classification for occlusive disease in the four commonly affected vessels are:

- (1) Carotid hemiplegia
- (2) Vertebral hemiplegia
- (3) Basilar hemiplegia
- (4) Subclavian hemiplegia

#### *Symptomatology and Signs*

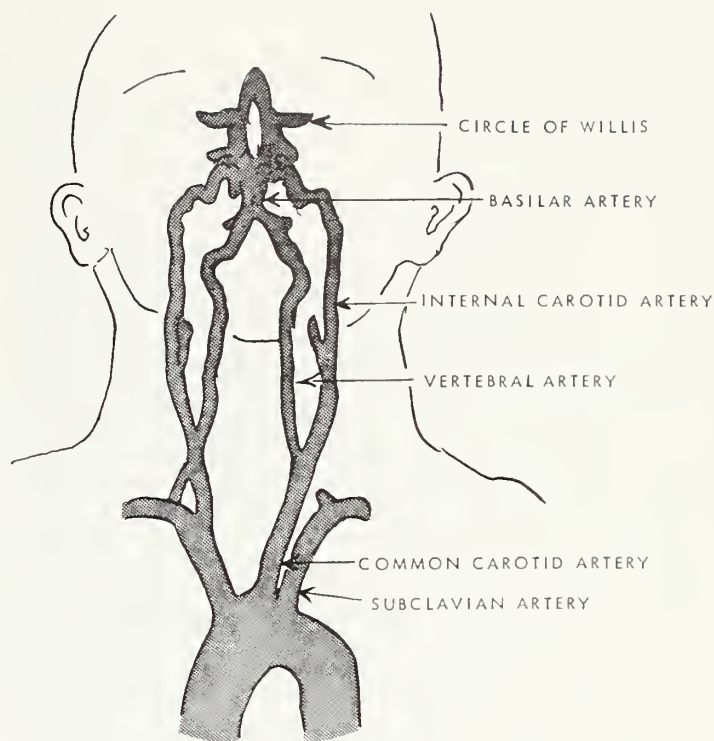
##### *1. Carotid Hemiplegia*

Because of the complex mechanism involved in the development of a thrombosis, symptoms become unpredictable. When taken with the associated variables such as heart disease, detection is difficult, but not impossible. The value of these signs and symptoms is to assist the clinician in early diagnosis. If the physician is astute, the mounting evidence will become a definite picture. Thus by inference, the neurologic lesion may be predicted.

##### *A. Early Manifestations*

The principal feature of a stroke, of course, depends on which portion of the vessel (single or multiple) is affected and whether transient early warning information can be detected by the examiner.

Before actual evidence of cerebral ischemia occurs, numbness of the face or pe-



ripheral extremity may be derived from a good history. In conjunction with a complaint of *transient faintness*, as contrasted with vertigo, one's suspicions should be aroused. A *carotid bruit* may then be audible at the root of the neck using a bell type stethoscope. (The diaphragm variety of stethoscope is more apt to produce sound wave distortion.) At times decrements of the carotid pulse may be found, but unless calibrated instrumentation (oscilloscope) is available, this is difficult to confirm. More readily, diminution of *conjunctival vascularization* or of the *retinal vessels* in the temporal quadrant can be seen. *Ophthalmodynamometry* (to detect diminished retinal artery pressure) is also helpful. Another aid in evaluating early diminution in blood flow of the carotid system is *carotid artery compression*. This test may be dangerous unless done by experienced individuals. Nevertheless, useful information may be obtained when determining the site of the lesion. Finally, collateral blood flow is often sufficient to overshadow early manifestations and when the supply is significantly impoverished, occlusion results.

##### *B. Late Manifestations*

Cerebral ischemia occurs only when the atherosclerotic plaque reduces the lumen to critical limits.

*Headache* is not uncommon following early episodes and may serve as a guide in accu-



rate diagnosis. Contralateral *extremity weakness* which may be transient, occurs frequently and may herald complete paralysis. If the dominant hemisphere is involved, various degrees of *dysphasia* develop. On the non-dominant side, *agnosias* may occur. When the middle cerebral artery becomes completely occluded, *hemiparesis*, either motor, sensory, or both, dominates the clinical picture. If the anterior cerebral artery flow is disrupted, mental changes ("little strokes"), and sucking reflexes are affected, making swallowing difficult. If the posterior cerebral artery is blocked, *hemianopsia* or *third nerve palsy* develops. The syndrome of internal carotid occlusion is often the same as that of the middle cerebral artery. When *monocular blindness* occurs there is usually impaired flow in the ophthalmic artery, a branch of the internal carotid.

These symptoms may vary from case to case and are related to the time with which thrombus accumulates. Primary deposition on plaques may be complicated by secondary clots up and down a vessel wall. The effect depends on the amount of collateral circulation present and the speed of resultant infarction.

### 2. Vertebral Hemiplegia

The syndrome associated with unilateral occlusion of the vertebral artery is usually related to a cerebellar *ataxia*. However, if the collateral circulation is adequate there may be no clinical signs.

#### A. Early Manifestations

*Vertigo* in the form of postural dizziness may lead to an unsteady gait. On the other hand, short periods of *drowsiness* or *mental confusion* may alternate in complex fashion. More important, "*drop spells*"—sudden dropping to the ground, particularly when the head is extended, without loss of consciousness, may point to vertebral insufficiency. *Diplopia* or other visual changes and *slurred speech* or even *difficult swallowing* suggest involvement of cranial nuclei.

Sometimes, complete rotation of the head and face precipitates dizziness in patients. In addition, a bruit may become audible in the supraclavicular fossa. On arteriography, occlusion can be demonstrated in the contralateral artery (when the head is turned to

the affected side) at the level of the sixth cervical vertebra.

#### B. Late Manifestations

Later, alternating *motor or sensory hemiparesis* with gross and constant *ataxia* occurs. The cranial nerve symptoms such as persistent *diplopia*, *dysarthria*, and *dysphasia* become more definite.

### 3. Basilar Hemiplegia

Hindbrain arterial involvement is characterized by bilateral pyramidal tract signs. Often cranial nerve palsies become involved to complete the picture.

#### A. Early Manifestations

Eye signs from the oculomotor, third cranial nerve (III N.), cause blurred vision. When combined with *memory lapses* and *mental confusion*, transient cerebral ischemia is a progressive development. *Unilateral or bilateral weakness* and *numbness in the hands* may include variable *increased tendon reflexes* and *extensor plantar responses* (Babinski).

#### B. Late Manifestations

*Diplopia* (IV, VI N.), *facial numbness*, (V N.), *masseter weakness* (VII N.), *deafness* (VIII N.), and *dysarthria with swallowing deficits* (XI N.), often occur. Finally, *coma*, *cerebellar ataxia*, *blindness*, and *quadriplegia* may develop late in the disease process.

### 4. Subclavian Hemiplegia

Transient cerebral ischemia develops as the dominant feature. The syndrome may occur as a "subclavian steal,"<sup>8</sup> when the arterial blood is siphoned from the opposite vertebral artery because of proximal stenosis or occlusion of the subclavian artery. Exercise of the upper extremities is related to the development of dizziness as a symptom. This characterizes the "subclavian steal" syndrome.

#### A. Early Manifestations

Signs and symptoms develop only when sufficient occlusion occurs in the associated vessels, e.g., the Circle of Willis.

*Faintness*, *vertigo* or *loss of balance* occur most frequently. By exercising the arm, a reduction in pulse volume or blood pressure may result. *Bruit* in the neck vessels on the affected side are particularly common. *Arm pain* on elevation may be a guide especially if present for six to 12 months.



### B. *Late Manifestations*

*Visual blurring, throbbing headache and coordination difficulty*, occurring especially when the arm is elevated, may progress to hemiparesis.

### SUMMARY

Early recognition of cerebrovascular disease is a growing concern to all physicians today. If the pre-hemiplegic patient can be identified more readily, prevention of stroke can materially reduce morbidity and mortality. A suggested classification for occlusive vascular disease is given to conform to the four commonly affected vessels: carotid hemiplegia, vertebral hemiplegia, basilar hemiplegia and subclavian hemiplegia. To identify a patient as a right or left hemi-

plegia is meaningless. By noting early and late manifestations, the clinician is assisted in his diagnosis, thus leading to prompt, appropriate treatment. □

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## Tumor Clinic Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.

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### CASE No. 25: Rhabdomyosarcoma of the Deltoid Muscle

**PRESENTATION:** The patient is a 61-year-old Negro female, who was in relatively good health until August, 1968, when she noted a lump over the right deltoid region.

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

She thought nothing of it for several months until February, 1969, when she saw her family doctor and he at that time thought it was a lipoma and told her to come back in a month. When she returned the lump had grown considerably in size. Her physician then hospitalized her and took a biopsy of the lesion. The lesion was reported by the pathologist to be a malignancy and the patient was referred to another doctor who did a wide local excision of the mass. The pathological report on the mass indicated that the lesion was a rhabdomyosarcoma. The biopsy was done in April, 1969, and the patient did quite well after surgery until September, 1969, when she noted a lesion over the scar. At that time the satellite lesion was removed. She was then referred to the University of Oklahoma Medical Center.

The patient has been feeling well except for two episodes of hemoptysis, one in September and one in October. She has had no weight loss, has a good appetite, and the remainder of her review of systems is negative. On physical examination, the patient looked very healthy. Abnormal physical findings were limited to the right upper shoulder where there are several well-healed scars over the deltoid area. There are three indurated areas with venous distention and heat over each one of the areas, and there



is limitation of motion in the shoulder. The chest x-ray now shows several metastatic lesions.

DOCTOR CONDIT: Any questions about the history? Doctor Williams, do you have any comments about the management of this kind of lesion?

DOCTOR WILLIAMS: It is very possible that no method of management of this case would have prevented a very poor result. I think that it is true that in this institution we have never cured a rhabdomyosarcoma. On the other hand, I believe that if there is a chance of cure, treatment must be early and radical, and I don't think you can depend on local excisional therapy of this type of lesion. The only opportunity to cure this lesion would have been a fore-quarter amputation after the first biopsy, and that wouldn't offer a very good chance. There is nothing surgical to offer at this point.

DOCTOR CONDIT: Doctor Snow, are you going to challenge Doctor William's statement about never having cured a patient with rhabdomyosarcoma in this institution?

DOCTOR SNOW: I don't know if we have ever cured one, but we do have a 13-year-old boy who had a rhabdomyosarcoma of the maxilla who was treated with radiation therapy and Actinomycin D, then followed with a maxillectomy, who is now two years without evidence of recurrence. I suspect the ophthalmologists have cured some of the orbital lesions which are more amenable to therapy. I think that the maxillary lesion I mentioned was also a very highly malignant tumor, but I assume you are referring to those of the limbs rather than rhabdomyosarcomas in general.

DOCTOR WILLIAMS: I'm talking about the long skeletal muscles. Of course, the reports in the literature are not quite that dismal.

DOCTOR CONDIT: Doctor Parker, what about your experience at St. Anthony Hospital?

DOCTOR PARKER: Very bad too, but I was thinking that about ten or 15 years ago there was a man here who had a rhabdomyosarcoma. I thought that man was cured, but I'm not sure.

DOCTOR WILLIAMS: It is very possible that several patients could have been missed.

DOCTOR CONDIT: The difference be-

tween zero survivors and one survivor is probably not significant. Doctor Bogardus, would you like to comment on the role of radiation therapy in these tumors?

DOCTOR BOGARDUS: It is like many other tumors in the highly malignant category. The tumors are often radiosensitive and may respond, but this is highly variable. Another patient that we are treating at the present time is responding remarkably well to radiation therapy. There is no way to say exactly how these are going to respond, but as far as hoping to cure one primarily with radiation, I think the results are very poor. There is just very little that can be done. Perhaps a combination of chemotherapy, radiation therapy and surgery is the best form of treatment. This is the situation where, if you can manage the local disease and you don't have distant metastases, you might be able to cure it.

DOCTOR CONDIT: Doctor Bottomley, how about chemotherapy?

DOCTOR BOTTOMLEY: Some of these patients will respond to either Methotrexate or a combination of Actinomycin D and Vincristine. Methotrexate is the easiest to give and therefore, I would recommend that this patient receive it. It is given as a single intravenous injection at a dose of 0.5 mg/kg every two weeks. The patient should have a white blood count, hematocrit, platelet count and a BUN before starting therapy. The patient should then have a white blood count, hematocrit, and platelet count done before each subsequent injection. We have recently started treating some patients with a combination of Actinomycin D ("Cosmegen;" Merck Sharp & Dohme) and Vincristine ("Oncovin;" Lilly). The Actinomycin D is given at a dose of 0.010 mg/kg, I.V., daily for five days, and Vincristine is given at a dose of 0.025 mg/kg weekly. Later both drugs are given as a single injection weekly and then as a single injection on alternate weeks. We are currently using these two drugs in the treatment of a 16-year-old girl with rhabdomyosarcoma of the calf with inguinal and iliac metastases in combination with radiation therapy. We have previously used this treatment combination and then carried out surgical excision following the drug and radiation therapy.

DOCTOR SNOW: I'd like to comment on



## *Tumor Clinic* / BOTTOMLEY

the primary form of treatment of patients with this lesion, Doctor Condit. I'll admit this is a biased position, but it is held by many people. I feel strongly that patients with rhabdomyosarcoma in the head and neck area should be treated with radiation and chemotherapy to damage the tumor as much as possible before surgery is carried out. The only good results we have had with rhabdomyosarcoma or for that matter with any sarcomas are those in which we have done just that. I think it reduces the chance of rapid post-operative recurrence of the tumor.

DOCTOR CONDIT: Yes, this has also

come to be our philosophy in the management of these patients. It is too early to evaluate the results in the patients we have treated this way so far, but we have had rather gratifying immediate results.

**IMPRESSION:** Recurrent rhabdomyosarcoma of the deltoid with pulmonary metastases.

**TUMOR CLINIC RECOMMENDATIONS:** Since the patient has already developed multiple pulmonary metastases, surgical and radiation therapy are not feasible. The patient can be treated with either Methotrexate or a combination of Actinomycin D and Vincristine in an attempt to palliate her disease. □

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## *Cherokee History to 1840: A Medical View*

R. PALMER HOWARD, M.D.

*Epidemics decimated the aboriginal Indians. Malnutrition, illness and mourning provide a psychosomatic explanation for the uninhibited behavior and violent factional strife during the removal period.*

THE RISE of a powerful nation depends on its success in politics, war, economics, and on its growth in population. Conversely, its decline results from losses through war, famine and disease. Epidemics may be devastating. Almost as serious are ignorant and slovenly practices in personal and public hygiene. The Europeans, furthermore, introduced alcohol to the aboriginal Americans, and the demon of "firewater" played an important part in undermining the health and behavior of the Indians.

The principal focus in this paper will be on health factors in the history of the Cherokee Nation of Indians from the time of the earliest European contact until the comple-

tion of the removal west of the Mississippi River in 1840. This report will not dwell on the healing ceremonies of the Indian shamans or the efficacy of their herbs and other remedies. Historical developments leading up to the removal require more detailed presentation, partly to elucidate the careers of individual leaders and, more importantly, to draw inferences about their effects on the physical and emotional health of the Cherokees.

De Soto probably encountered the ancestors of the Cherokees in 1540 when he crossed the mountains of northern Georgia and Tennessee. The land appeared rich in natural resources to the later British and French visitors. The traders from the colonies of Virginia and Carolina found the Cherokees in the Appalachians extending southward from the Ohio River and as far west as the present borders of Kentucky and Tennessee. Rumors of gold spread among the distant hills. Throughout the colonial period the Cherokees remained powerful in war and independent in politics. Yet they yielded vast areas of their northeastern lands to the advancing colonials who received fresh waves of European immigrants.<sup>1-4</sup>

Epidemics of newly introduced diseases probably played a greater role in weakening



the Indians than the guns and military tactics of the conquerors. With the possible exception of syphilis, the pre-Columbian Americans suffered from none of the major infectious diseases of the Old World. Without previous immunity, the Indians were often decimated by smallpox and measles epidemics after contact with the whites.<sup>5-7</sup>

The Cherokees lost almost half their population, and the neighboring Catawba Nation shrank nearly to extinction in the smallpox epidemic of 1738. This disease recurred often. It played a significant role both in the war and in the peace negotiations during the Cherokee troubles with the British Colonies in 1758-61. The Cherokees were more susceptible than the uninoculated colonials of Charles Town, South Carolina, but the latter also suffered terribly from the prevailing epidemics.<sup>3</sup> (pp. 224, 232), 8-11

These Indians had the advantage of isolated villages in the mountain plateaus which were more wholesome than the marshy coastal regions and the crowded unsanitary port towns. The hygienic conditions among the Cherokees were probably as good as in the rest of America when independence came in 1783. The introduction of iron tools and new methods had improved agriculture, cloth weaving and other home crafts of the Indians, but the traders' gift of rum and whiskey undermined the native way of life and moral code to an extent which offset much of the benefit from the advanced civilization.

After the War of American Independence, the Cherokees transferred their allegiance from the British and made peace with the American government in 1785 by the Treaty of Hopewell. These Indians respected President George Washington and his early successors. Nevertheless, the enforcement of new treaties diminished their holdings; for example, the Cherokees contributed vast areas to the Territory and later State of Tennessee.<sup>2</sup> (pp. 35, 47), 12 The Cherokee Nation, however, stood firm beside the Americans in the War of 1812. The Ridge, hereafter called Major Ridge, and John Ross won plaudits for heroism from General Andrew Jackson while fighting the Creeks at Horse Shoe Bend on March 27th, 1814.

Following the Louisiana Purchase, the

pressure rose to remove all Indians west of the Mississippi River. The Cherokee chiefs resisted, but small numbers of their tribe exchanged their homes for lands in the Arkansas country during 1805 and 1806. A few years after the Creek War a sizable minority of Cherokees, including Jolly and Sequoyah, defied the majority and their leading chiefs, when they signed the Treaty of Turkey Town with Jackson in 1817. By the treaty these men exchanged their eastern lands for western territory.<sup>1</sup> (pp. 48, 83)

Events followed rapidly as the eastern Cherokees braced to resist further encroachment on their soil. Sequoyah's Cherokee syllabary stimulated literacy throughout the Nation. Leaders with intelligence and some with contemporary American education, endeavored to duplicate in the Cherokee Nation the social and political standards of an American state. In 1827 the Cherokee constitution was committed to writing and it included the 1819 law which set the death penalty for an independent land cession. The newspaper, *The Cherokee Phoenix*, was printed in Cherokee and English, and was published at New Echota, Georgia, from 1828 to 1835. This national paper served both to educate the Cherokees and to inform the American public of the Cherokee cause.

The pervading American desire for new land and the states' rights attitude of their neighbors, proved overwhelming odds for the Cherokees and their sympathizers. The Georgia law to assume complete authority over the Cherokees was passed in December, 1828, to take effect in June, 1830. The opening of the Cherokee gold mines and the passage by the United States Congress of the Indian Removal Bill in 1830, followed in short order. The United States Supreme Court would not uphold the right of the Cherokee Nation to sue as an independent power in 1831.<sup>1</sup> (p. 127), 13 Governor Gilmer of Georgia ordered the arrest of the white missionaries of the American Board, Samuel A. Worcester and Elizur Butler, for continuing to live among the Indians without a permit. The state courts sentenced them but in the spring of 1832, in *Worcester vs. Georgia*, the United States Supreme Court under John Marshall upheld the Cherokee Nation as a "distinct community" and ruled against the acts of Georgia.<sup>1</sup> (p. 177)



The hour of triumph of the Cherokees was short-lived. President Jackson would not enforce the law. In the face of the intransigence of the federal and southeastern state officials, John Ridge, one of the Cherokee delegates to Washington, sadly concluded that agreement to remove west would prove the best policy for the Cherokees. His educated cousin Elias Boudinot, the newspaper editor who had written eloquently in behalf of the Cherokee Nation, now changed his stand to join Ridge in opposition to Chief Ross and the majority. Worcester and Butler reluctantly petitioned the governor of Georgia for pardon and agreed to leave the state. Because of this surrender many Cherokees regarded all white missionaries with suspicion and distrust.<sup>1</sup> (pp. 179-209)

Even though the Choctaw and Creek Nations had succumbed to the pressures for removal, the majority of the Cherokees still stood firm. At various times representatives of the western Cherokees acted with the federal agents to induce their eastern brothers to remove. Rivalries among the political factions of the Cherokees grew more intense as the federal and state authorities deprived the Indians of their rights. Finally, in the absence of Chief Ross and his leading adherents, and under the artful blandishments of Jackson's representative, the Reverend J. F. Schermerhorn, the Treaty of New Echota was signed on December 29th, 1835. Major Ridge signed first as leader of the tiny minority.<sup>10</sup> (p. 126), 13 (pp. 180-182) Second Chief George Lowery led the Cherokee resisters, who sent petitions to Washington expressing their opposition to the treaty. Ross struggled hard. Prominent politicians and large numbers of the American public spoke out against the treaty, but with Jackson's influence it was ratified by one vote in the Senate on May 23rd, 1836.<sup>14</sup> The removal would be enforced in two years' time and bring despair, disease, and death to many Cherokees.

The standards of health and prosperity among the eastern Cherokees remained generally good during the early nineteenth century. Their advancing civilization brought them comfort, though many still lived in the primitive way in the hills. These eked out a livelihood by hunting and tending small plots of corn. The more prosperous in the

lowlands owned trading stores and large farms with Negro slaves. The old nemesis, smallpox, recurred periodically. In 1806 a severe epidemic prompted the Cherokee chiefs to engage a white physician who was paid \$150 for his services, a large sum at the time. Another epidemic struck the Cherokees in 1824, especially near the Valley Towns of North Carolina and the hills of Tennessee. The missionary Moody Hall reported 27 deaths in one small town and expected a thousand fatalities in the nation unless he could obtain vaccine and influence all to accept it. A native conjurer promised safety to those who participated in a special dance.<sup>2</sup> (pp. 135-136, 206) The conjurers exerted a strong counterforce to the medical practice of Doctor Elizur Butler during the 1820's. Many natives preferred their rituals and herbs or, at least, followed the old and new way simultaneously. When their charms failed, the native conjurers blamed the meddling of the missionaries, and the latter often were frustrated and provoked.<sup>1</sup> (pp. 69-70)

Consumption gradually replaced smallpox as a threat to the life and well-being of the Cherokees and this tubercular affection increased in importance throughout the nineteenth century. In 1823, Elias Boudinot wrote that perhaps the "Cherokee Nation is destined to fall by this Instrument of Death."<sup>15</sup> Measles also occurred in epidemics. In those years, while the Cherokees had their homes and adequate food, measles and smallpox produced little more devastation among the Cherokees than among the whites.<sup>1</sup> (p. 293)

The increased proportion of educated citi-

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zens, the admonitions of the missionaries, and strict law enforcement by the Cherokees altered their level of civilization. During the 1820's the local courts controlled the worst antisocial effects of excessive drinking and apparently reduced the incidence. After the government of Georgia abolished the Cherokee courts in 1830, the state officers permitted whiskey peddlers to trade with the Indians. Often the Indians were cheated, angered, and humiliated. As they lost their lands they worked less and produced little food. Idleness gave them more time for drinking.

The Reverend Samuel Worcester noted a marked deterioration in the behavior of the Georgia Cherokees in 1833, after his 16-month incarceration in the state prison. Without their national courts, the Cherokees were unable to discipline or protect their own citizens and children, and nowhere could they prosecute the Georgians. In this lawless period Worcester noted an increase in drunkenness with attendant quarrels and unusually frequent murders in the nation.<sup>1</sup> (pp. 206-208) The unfortunate political and economic conditions and the undisciplined behavior produced dire consequences on the innocent children and older family members of the despairing Cherokees. Their sympathizers could only pity, but many, like Worcester and his superiors in Boston, then favored removal west as a preferable alternative to increasing degradation.

While the leaders of the majority party in the Cherokee Nation East stubbornly resisted, they pondered about the conditions in the west. All feared the strange country far from their native land. The government officers praised the abundant game and pleasant fields among the rolling hills of the newly assigned western border territory. The eastern Cherokees, however, placed little trust in their words or those of several visiting western Cherokees whom they considered treacherous accomplices of the federal officers.

The Indians justly feared the dangers of the journey and the virulent fevers in the western country. During an excursion westward from the frontier posts of Indian Territory, George Catlin described a devastating

epidemic of "bilious fever" among the United States Dragoons. Catlin encountered both John Ross in the east and the Cherokee Chiefs in the west during his travels in the 1830's. The missionaries to the eastern Cherokees probably were also aware of the contemporary reports of the Reverend Cephas Washburn, first missionary to the western Cherokees from the American Board. His *Reminiscences* encompass grim tales of serious long-lasting "bilious remitting fever" [presumably typhoid fever], innumerable mosquitos, and recurrent bouts of ague and chills. Once he nearly died with fever, delirium and jaundice.<sup>16-18</sup>

Widespread were the tales of the tribulations and many deaths from cholera during the removal of the other southeastern tribes. Some groups traveled by the overland routes through the marshes and others by the waterways of the Mississippi River system. Reports of cholera in the spring of 1834 reached the assembly camp of the Cherokees who had enrolled with the Superintendent of Removal, Benjamin F. Currey. To his dismay, more than half the enrollees changed their minds. After further delays in the whiskey-infested camp, the remaining 457 Indians under Lt. J. W. Harris embarked on the river boats on March 13th, 1834. A few died from measles and accidental drowning in the first weeks. Then cholera struck before they reached the Arkansas River. Low water and shoals above Little Rock forced them to leave the boats and proceed by land. By April 15th, the cholera epidemic was at its height. Fifty emigrants and a physician died from this affliction and 31 from other causes before they reached Dwight Mission in the Cherokee Nation on May 10th, 1834. Within the year, half the remainder of this party died, as well as many missionaries and troops at Fort Gibson. Lieutenant Harris survived the acute effects of the infection but died a few years later.<sup>19</sup>

Cholera also affected Cherokee parties who attempted the journey by their own resources during this spring. It is hardly surprising that a letter read by Tom Foreman about the unfavorable conditions and continued fevers in the migrant families should have discouraged further enrollment among those attending a meeting in the east



in September, 1834.<sup>20</sup> The dangers of travel and living in the west frightened the eastern Cherokees. The majority party among them desired desperately to stay home. They faced the further pressures of the federal and state authorities with stubborn resistance.

The United States Government in 1831 appointed a superintendent for the removal of the Cherokees from Georgia. After the death of the first appointee, Benjamin Currey, in 1836, Nathaniel Smith of Tennessee, a retired general, held this office through 1837 and 1838. The task was beset by three major sources of difficulty. These were the conflict of both opinion and action between senior members in various branches of the United States Government; the impatient and selfish attitude towards the Indian displayed by the governing bodies in Georgia and the neighboring states, and their representatives in the national capital; and the stubborn resistance of most Cherokees to enroll for emigration.

The vacillating governmental policy and the awareness of the brief tenure to Indian Service appointments combined to impair General Smith's administrative efficiency. It is unfortunate, but scarcely surprising, that Smith and several of his assistants were investigated about padded and unauthorized expenses and inefficient administration.<sup>21</sup> Instances of bureaucratic niggardliness in health matters will be presented in detail hereafter. Selfishness, jealousy, and criticism touched nearly every executive of the Indian Bureau. From the available documentary evidence and the lasting reputation among the Cherokees, however, the regular army generals, John Ellis Wool and Winfield Scott, and several junior military officers served with unprejudiced consideration.<sup>13</sup> (pp. 193, 203, 209), 19 (pp. 263-300), 22

In retrospect, the Cherokee removal was inevitable after the Senate ratified the surreptitiously secured, but widely disavowed, Treaty of New Echota. Two years after its proclamation, that is, by May 23rd, 1838, all Cherokees were ordered to vacate their former homes in the eastern states.<sup>14</sup> The majority remained adamant, but a minority accepted the treaty. Leaders and adherents of the "Treaty Party" sold many of their possessions and obtained favorable terms for their immovables from the federal and state

representatives. The United States Commissioners for Cherokee Removal wrote: "The intelligent and wealthy are zealous in settling their affairs, getting all the money they can under the Treaty and looking exclusively to their own interest, with the most perfect indifference to the interests of the great body of their people."<sup>23</sup> From an estimated total of 18,000, about 2,000 eastern Cherokees were enrolled by the midyear of 1837. The commissioners reported over \$65,000 payments due these enrollees, and the disbursing officer appointed by the Indian Bureau submitted an additional official request for subsistence, transportation and compensation for improvements, which together exceeded \$375,000.<sup>24</sup>

Western travel was always dangerous even for the wealthier and more acquiescent Cherokees who traveled under government supervision. The water route by the Tennessee, Ohio, Mississippi and Arkansas rivers required about four weeks, and on the whole proved less hazardous than the slower land route. The Indians traveling by water nevertheless endured many harrowing experiences, such as collisions of the boats and grounding on snags and sandbars. Fires for cooking were often uncontrollable on the windblown open decks. Overnight stops on the shore solved the feeding and sleeping problems, but the camps facilitated the introduction of whiskey with consequent unruly drunkenness and narrow escapes from drowning. In previous years epidemics of dysentery and cholera killed many Indians and transporting personnel during travel on the Mississippi River system, but such serious infections were not always prevalent. Only two children died from about 700 Indians who traveled by this water route in March, 1837, and April, 1838.<sup>19</sup> (p. 284), 25

To conduct the March, 1837, journey, Smith appointed his assistant superintendent, Doctor John S. Young, who contracted for the steamer *Newark* on the Tennessee River at Tusculumbia, Alabama. However, squabbles about the prearranged charges with the disbursing officer, Doctor Phil Minis, delayed the departure for three days. On March 4th the party of 466 Cherokee and five Creek Indians embarked. The medical responsibility was not assumed by Young or Minis, but by Doctor C. Lillybridge of



Utica, New York. With the approval of Smith and Commissioners Lumpkin and Kennedy, Lillybridge had personally traveled to Knoxville and spent \$200 for medical supplies and stores. Apparently at least 600 emigrants had been anticipated, and Doctor Lillybridge also prudently prepared for emergencies during a long journey. Prominent leaders of the "Treaty Party," such as Major Ridge, John Ridge, Stand Watie and Archilla Smith, were among the emigrants. A Creek Indian, Henry Clay, and another man suffered severe cough and weakness from chronic consumption. The doctor also treated 15 patients with influenza, four with pleurisy, one with peripneumonia, several with toothache, a few with diarrhea, and two young men with gonorrhea. The party was disbanded in the eastern part of the Indian Territory rather than at Fort Gibson. The physician's final report indicated that all sick were convalescent except for the two men with consumption.<sup>19 (p. 273), 26</sup>

Doctor Lillybridge sold the unused coffee and perishable hospital stores to Looney Price, an earlier Cherokee settler, but sent the valuable medicines back to Ross Landing for future trips. Although no deaths occurred in the 27-day journey, disbursing officer Doctor Minis wrote that a physician with military experience would have spent only a quarter as much for medical stores. The extensive correspondence with the Office of Indian Affairs about these medical expenses and about Doctor Lillybridge's prearranged pay of six dollars instead of the standard five dollars daily, indicates that economy was a more important consideration to the distant federal government than the safety and health of the emigrant Cherokees. Many officers regarded Smith's administration of the removal as grossly inefficient.<sup>27</sup>

Superintendent Smith instructed Disbursing Agent J. C. Reynolds to make preparations in September, 1837, for the early departure of about 1,400 emigrants in two groups by the land route. New enrollments fell far below withdrawals so that only 365 Cherokees left the eastern agency on October 14th, 1837. Major B. B. Cannon conducted this "Treaty Party" group, which included James Starr and Charles Reese. The prob-

lems of surmounting the Cumberland Mountains, ferrying the Ohio and Mississippi rivers and crossing the swamps delayed them. Severe illness among the emigrants and conductors also slowed their progress.

The government physician G. S. Townsend treated many with febrile infections and 15 emigrants died. Doctor Townsend reported that the "causes which operated in producing the great amount of sickness . . . were mainly attributable to the unwholesome stagnant water, which we were compelled to use throughout Illinois, the exposure to marsh effluvia, and the freedom with which the emigrants indulged in the use of fruits . . . particularly grapes, which proved a certain prelude to violent attacks of Dysentery and Bowel complaints of dangerous character." The fruits probably played a lesser role than the yet unknown parasite of malaria and the bacilli of typhoid fever and dysentery. Eight young children died, but several had been severely ill with infantile diarrhea before the beginning of the trip. The doctor diagnosed the seven deaths in persons between eight and 65 years old as follows: three dysentery, two typhus fever [probably typhoid fever], and two inflammation of the lungs. Townsend observed that three of the adults refused all the medicines and attention of the physician. The medical supplies used included one ounce of quinine sulfate; the cardiac stimulant, squills; the emetic, ipecac; many purgatives; a small amount of the opiate, laudanum; one quart of whiskey, and one quart of cognac brandy. The alcoholic supply was moderate for the times. Conspicuously absent were the anti-bacterial tablets and injectibles commonly prescribed today. Cannon disbanded his sick and dispirited party after reaching the settlement chosen by the Ridges. Since this location was 50 miles east of Fort Gibson, the receiving officer was distressed and again complained to headquarters.<sup>28, 29</sup>

During 1837 and the first half of 1838, some parties of Indians migrated with their own resources and received commutation allowances for transportation. Probably they believed that travel in small groups, selecting routes according to the climate and availability of game, would be less hazardous than the government-sponsored migrations. An accurate tally cannot be made for



the Indians who died or disappeared in isolated areas en route, but several small parties arrived at the western agency.<sup>30,31</sup>

The majority of the eastern Cherokees, including nearly all the full blood Indians, repeatedly voted against removal and steadfastly stood behind their old leaders, White Path, Going Snake and Principal Chief John Ross. The eloquent Chief and his associates in Washington struggled to spread their influence beyond sympathetic friends to the opposing politicians. President Martin Van Buren submitted to Congress the recommendation of Secretary of War J. R. Poinsett, which would delay the enforcement and authorize minor modifications in the 1835 treaty. This plan produced violent expressions of states' rights from southeastern politicians, especially Governor Gilmer of Georgia. Accordingly, the federal officials withdrew their support of the compromise.<sup>4</sup> (p. 290), 32, 33

Among the hills of Georgia and North Carolina and even near the government posts, most Cherokees refused to enroll or accept cash annuities, clothing or food from the United States officers throughout the frustrating negotiations. Many embittered Indians supported themselves on game and wild plants rather than cultivate the fields still within their control. Perhaps some were guilty of killing cattle belonging to the new settlers, but the Georgia lottery system deprived the Cherokees of most of their long-held lands, and Indians could not testify in their own defense in the state courts.<sup>19</sup> (pp. 251, 271), 23

Whiskey peddlers infested the Indian lands. Drunken Indians were easily deceived and robbed. The weakened and besotted men and their undernourished families lost the natural resistance to endemic and epidemic diseases and suffered more readily from exposure and fatigue. These physical strains compounded their abject grief and despair, when in May, 1838, Major General Winfield Scott ordered the regular United States troops and the less disciplined militia to round up and imprison all Cherokees in rude stockades.<sup>10</sup> (p. 130), 19 (p. 286), 34

Exposure, crowding, poor hygiene, and inadequate cooking facilities characterized the outdoor prisons. The soldiers seldom granted the Indians the opportunity to bring their

personal belongings and utensils. The unpleasant rations often were left uneaten. General Scott admonished and assisted Superintendent Smith to provide adequate medical care, and on his own responsibility Scott ordered appropriate vaccination against smallpox. Subsequently, Smith defended the employment of the supplementary staff: "The physicians were all needed at the different depots and the services of the Directing Physician . . . were and are still indispensable, the physicians in addition . . . are not yet sufficient. There is considerable sickness among the Cherokees now; the measles, hooping [sic] cough, pleurisy, and bilious fevers prevail extensively and at this post where there are upwards of 4,000 collected, I have only three physicians—and under the circumstances it will shortly be impossible for one to do justice to more than 300. It is the same at the other posts. . . ." Scott realized that the "very general sickness and serious mortality in the stockades" would increase the usual hazards to health from travel through river, marsh and wood in the summer sickly season. Smith had dispatched over 2,000 captives west in three detachments by June 19th, when reports of their sufferings came back to headquarters at the Cherokee agency. Then General Scott suspended the migration until the sickly season would be over in September, and he agreed that Chief John Ross and Lewis Ross would serve as supervising conductors. Scott's consideration for the Cherokees heightened the disagreement with Superintendent Smith and provoked protests from the local politicians and migration contractors.<sup>19</sup> (pp. 288, 299), 35 However, the agreement led to rejoicing among the Indians.<sup>1, 4, 10, 36</sup>

In the fall of 1838 began the most tragic and best known of the many "Trails of Tears," and yet this mass migration was organized by the Cherokee officers. The proportions of sickness and death to the number of migrants exceeded those in the government-sponsored removals. The majority of the eastern Cherokees had resisted the efforts to remove them. They grew increasingly distrustful of all government officers as the events unfolded following President Jackson's 1829 inaugural address. The barbaric behavior of some members of the militia and the accompanying



bands of vulture-like citizens who grabbed their lands and personal belongings during the roundup, provoked the Cherokees to suspicion and hatred of all white men.<sup>1</sup> (pp. 287-297), 10 (p. 130), 19 (pp. 287-290), 37 The full blood Cherokees put their trust in John Ross and his associates for leadership before and through the removal.

Further difficulties, some unanticipated, arose. The summer turned oppressively hot and humid, but without rainfall. The weather contributed to the continued serious illness and mortality in the stockades. The survivors were weakened and many ill when the marches began. The streams ran dry so that large parties could not travel over the hills. Though the first party broke camp at the end of August, the drought halted them for over a month after only two days of travel.<sup>19</sup> (p. 300)

The unexpected delays in setting out prevented the completion of the migration until midwinter when the muddy roads and icy rivers made travel extremely hazardous. The Cherokees had been imprisoned in spring without their warm clothing, and the supplies distributed en route proved inadequate for the wintry conditions. The physicians with each party could not pass quickly along the narrow muddy roads. They could only treat the sick in the night camps, poorly protected from the cold and rain. In these conditions the common epidemics of children, such as measles and whooping cough, would be frequently complicated by broncho-pneumonia, and the same respiratory disorder would affect the very old, the chronically ill and the physically exhausted adults. No specific treatments were available in the nineteenth century. Bleeding and purging would only further weaken the sufferers. The needed rest, warmth and proper diet were unavailable. Several accounts of the miserable traveling conditions were published in the local and the New York newspapers. Even the best possible arrangements of Ross and his associate planners did not prevent the disastrous suffering.<sup>19</sup> (pp. 301-312), 38

The selected route began near the old Cherokee Agency at Rattlesnake Springs, which was close to the present town of Charleston, Tennessee. After the migrants

were received by the Cherokee conductors, they marched along the north bank of the Hiwassee River, ferried the Tennessee River near the junction, and thence passed by McMinnville and Nashville through Hopkinsville, Kentucky, until they met the Ohio River opposite Golconda, Illinois. Many oxen and wagons and about 5,000 horses took part in the overland march, with many men and women afoot. Some observers likened it to the movement of an army but, if so, it must have more closely resembled a disastrous retreat. Ross assigned a conductor, assistant conductor, contractor, farrier, physician, and other officers to each detachment. Sometimes sickness or whiskey, "the bane of death," interfered with the performance of their duties. Well known but elderly chiefs might have no specific responsibilities, although they shared the hardships of the journey, and some died. The succeeding groups of emigrants grieved by the monument erected by Elijah Hicks over the grave of the famous 75-year-old Chief White Path.<sup>19</sup> (p. 303), 39

Travel with wagons over the Cumberland Mountains proved arduous, especially for the ill, but crossing the large rivers was still more difficult. Ice and storms on the Mississippi near Cape Girardeau held up the later migrants. Many Cherokees lie buried on the eastern bank, since the delays without adequate shelter or supplies compounded the mortal threats of hunger and illness. Most land parties swung south through Batesville, Arkansas, on the White River and thence due west to their destination. Others chose the better hunting opportunities along the westerly route by Springfield, Missouri, and thence southwest through Arkansas near Maysville. By either way, the total exceeded 800 miles and the route was estimated to take 80 days under average conditions. The longer traveling time necessary in winter increased the number of deaths from such natural events as old age and childbirth. Twelve parties, each of approximately 1,000, took the overland route. The remaining 228 Cherokee prisoners departed on December 5th, 1838, by the chain of rivers to Arkansas. This group included some supervisors and others considered too sick for the long land journey. The river trip also exacted its toll



of deaths, including Quatie, the wife of Chief John Ross.<sup>19</sup> (pp. 301-310, 384), 40

The Cherokee leaders reported to John Ross. Many of their notes are among the Ross Manuscript Collection now in the Gilcrease Institute in Tulsa. The published reports show inconsistencies, even of the names for the detachment conductors.<sup>13, 19, 39, 41, 42</sup>

The Reverend Evan Jones and the native preacher, Jesse Bushyhead, wrote to the Baptist headquarters, and the missionaries appointed by the American Board of Commissioners for Foreign Missions reported to them. Jones wrote from Little Prairie, Missouri, on December 30th, 1838: "I am afraid that, with all the care that can be exercised with the various detachments, there will be an immense amount of suffering, and loss of life attending the removal. Great numbers of the old, the young, and the infirm will inevitably be sacrificed. And the fact that the removal is effected by coercion, makes it the more galling to the feelings of the survivors."<sup>43</sup> Bushyhead reported a total of 82 deaths while his detachment was on the road from October 5th, 1838, to February 23rd, 1839. This number exceeded the 38 deaths according to Starr's tabulation of the official statistics. The large number of desertions and accessions by following bands probably accounted for the inconsistent tallies.<sup>39, 44</sup>

Doctor Elizur Butler served as a physician to an emigrant party and wrote on October 10th, 1838, from McMinnville, Tennessee. He estimated that "two thousand or more, out of 15,000, had died since they were taken from their homes to the camps in June last; that is one eighth of the whole number, in less than four months." After burying 40 members of his own detachment by the journey's end on January 25th, 1839, Doctor Butler revised his estimate of the total to 4,000 dead. By March, more parties had arrived west and Butler returned to Red Clay, Tennessee, to close the mission station and bring his wife west. In the belief that nearly one half had died during the winter from the estimated 1,000 hiding out in the mountains, Butler again raised his estimate to 4,600 Cherokees dead. Miss Starkey's evidence from the journal of the Reverend Daniel S. Butrick is confirmatory.<sup>1</sup> (pp. 282-302, 353), 38, 45

No one ever knew the full details, not even the names of all who died during the Cherokee-conducted migrations. Some migrants fell back to succeeding detachments and others deserted along the route. An officer of the United States Army enumerated 11,813 prisoners turned over to the conductors, whereas the receiving army officer counted approximately 11,500 arrivals in the west. A total of 424 deaths was officially recorded since there were 71 births during the migration. By the tallies of Chief John Ross, 13,149 departed for the west and, accordingly, over 1,600 either died or deserted. Ross's initial figures may have included some Cherokees who had never been captured or who had escaped from the stockades or the guarded migrations in June. Ross's travel commutations were based on army figures. It is understandable that Chief Ross could not argue with the United States Government on this point, and no one would gain by publicizing the larger estimates for deaths and desertions.<sup>4</sup> (p. 292), 10 (p. 132), 19 (pp. 310-312), 39

Land travel was slow in the late fall of 1838, even with the full assistance of the government. Nearly 700 of the Cherokees caught in the June roundup preferred to emigrate under the federal authority with John Bell of the "Treaty Party" as their leader rather than with conductors appointed by Ross. An experienced officer, Lt. Edward Deas, directed this group from the agency on October 11th, 1838, but within the week requested four additional soldiers to help control the intoxicated, squabbling Indians. Other difficulties were encountered during the trip of 88 days until January 7th, 1839. The "Treaty Party" Indians, however, suffered less than the others in Georgia because Commissioner Wilson Lumpkin intervened for them. They also benefited from larger travel allowances and the government transported their baggage up the Arkansas River. Since better conditions probably made them more resistant to disease and fatigue, it is not surprising that Deas ascribed no deaths to this removal operation.<sup>19</sup> (p.301), 46

As already mentioned, Doctor Butler estimated a high death rate among the Cherokees who escaped from the guards and tried to reach the secluded caves in the eastern hills. The soldiers searched for Indians with



little success. Tsali's wife and one of his children died in hiding after he accidentally shot a guard during the break for freedom. When Tsali surrendered himself for trial, Scott agreed to search the hills no more. General Scott wound up his whole command and left the area during November, 1838.<sup>1</sup> (pp. 300, 326-328), 47

Superintendent Smith could claim subsistence allowance for only 201 Cherokees in the mountains on January 4th, 1839. The Commissioner of Indian Affairs, T. Hartley Crawford, ordered Smith to cease all operations effective January 26th. Some Cherokees in the Valley Town region of North Carolina survived. They found a trusted white friend, William H. Thomas, who purchased lands in his name. Undoubtedly many Cherokees starved in 1839, but Thomas faithfully administered the trust. This was enhanced later by funds brought back by emigrants to the west who disliked the climate and the violence in the new nation. For several years no one knew the exact numbers of the Cherokees in North Carolina, but later the Bureau of Indian Affairs resumed ties with them.<sup>1</sup> (pp. 325-329), 48, 49

All residents in the western Cherokee Nation encountered many problems, but health matters assumed major importance. Cholera epidemics struck Fort Gibson and the surrounding area on several occasions before 1837. Many of the early mission families also were decimated by illnesses resembling typhoid fever. A smallpox epidemic afflicted the nearby Chickasaws and Choctaws in 1838. The western superintendent, William Armstrong, considered the northern part of the Cherokee Nation more salubrious than other areas of the Indian Territory. The Reverend Samuel Worcester, it should be noted, however, moved soon after his arrival in 1835 from the post on the bottom land near the forks of the Illinois River to higher ground at Park Hill three miles away, because he wished to escape the prevailing ague and fevers. The western superintendent's official report for 1838 emphasized the usual process of acclimatization as reason for the high rate of illness among the new Cherokee migrants during their first years. In the 1840 report, however, the su-

perintendent also mentioned civil dissensions and "consequently, a general neglect of cultivating their crops."<sup>36</sup> (pp. 512-514), 50-52

The government representatives were accurate in reporting the civil disorders. Also, the necessity for the acclimatization of immigrants was a widely held concept. After suffering dysenteric and other "miasmatic" fevers, the Cherokees profited from the experience of the settlers and the advice of neighbors by selecting locations on higher ground with safer water supplies. In time the newcomers would also construct weather-proof and better floored houses. The contemporary agents and historians, however, did not pay sufficient attention to more important underlying causes of the social disorganization.

The migrating Indians were in poor health, especially after having been robbed, imprisoned in stockades, and later forced to march through rain and cold for many months. If one fourth of their number died, it must follow that many of the survivors were weak in body and dreadfully sick at heart. Some undoubtedly died soon after arrival from diseases contracted or made worse during their hardships. Others of the weakened survivors suffered new infections in the west. In modern terminology, these Cherokees had a reduced resistance to malaria and other infections in the same way as undernourished prisoners of war have less resistance to many bacterial and viral infections than well conditioned soldiers. The debilitating effects of illness and the grief for lost loved ones naturally resulted in emotional depression. One indolent Cherokee father told Doctor Butler that he had lost one son in the stockades, one during removal, and a third after his arrival.<sup>1</sup> (p. 315), 10 (p. 132), 53, 54 The emotional scars of the sufferers might never heal, while even the restoration of bodily strength would require a prolonged period of adequate nutrition, shelter and general hygiene.

The physical and emotional sufferings of the adherents of Chief Ross probably contributed to their political troubles with the western "old settlers" and the hated members of the "Treaty Party" led by the Ridge family. The representatives of the United States Army and Indian Affairs Bureau had established satisfactory channels of com-



munication with the western Cherokee chiefs. The Ridge group and the federal officers doubted the intentions of John Ross but actively supported the western chiefs. These were loath to yield their accustomed privileges without resort to the prerogatives of their own constitution. New elections had already been scheduled for the fall of 1839, at which time the present western chiefs would be replaced by the choice of the numerically stronger newcomers. The situation in the spring of 1839 demanded delicate diplomacy from John Ross and his advisers. But the grief and physical sufferings of the emigrants probably made them lose their normal patience and political sagacity. The Reverend Cephas Washburn blamed John Ross for haste and tactlessness, but Washburn did not appreciate all the underlying factors.<sup>1</sup> (p. 308)

A prompt political union of the eastern and western governments in the spring might have created a calmer atmosphere and provided John Ross more opportunity to control his headstrong followers. The majority considered Major Ridge and his adherents to be traitors to the nation and blamed them for all the hardships of removal. The Ridges, father and son, and Elias Boudinot were assassinated on June 22nd, 1839.<sup>1</sup> (p. 310), 39 (p. 113), 55, 56 Terror and political murders shook the Cherokees for many years.

The physical and emotional stresses of the removal probably weakened mental and moral controls, and unleashed the murderous designs of the participants. The missionaries to the eastern Cherokees observed the progressive degradation in the social and religious habits.<sup>1</sup> (pp. 206, 280, 306), 57 The excessive use of alcohol often impairs the physical and moral well-being and reduces the food available for the victims and their families. The indulgence in whiskey troubled the military conducting officers during removal and, subsequently, this also concerned the Indian agents in the west.<sup>19</sup> (pp. 253, 292), 46, 53, 58

Missionaries like Worcester and Jones and a few other sympathetic Americans then realized that the bodily and emotional trials of the Cherokees contributed to their undisciplined behavior, although less charitable officials and politicians merely criticized their character.<sup>59, 60</sup> Members of the rival parties

among the Cherokees, of course, accused each other of savage cruelty, but their personal sufferings colored their judgments.

From the viewpoint of the present, surely the undisciplined violence of the Cherokees may be attributed to the influence of bodily and emotional stresses which affected them as individuals and groups. During the present century experimental physiologists throughout the world, such as Walter B. Cannon, have established the influence of the emotions on the animal bodily mechanisms by way of the autonomic nervous system.<sup>61, 62</sup> Hans Selye subsequently emphasized the effects of "stress" and proposed the "alarm reaction" theory to account for a common hypertensive condition and other diseases of adaptation in humans.<sup>63</sup> With a broad scientific base, many modern clinicians shared in the development of the psychosomatic interpretation of clinical disorders through careful observations in normal and diseased men.<sup>64</sup>

Malnutrition, disease, grief, anger, and alcoholism weakened the bodies and scorched the souls of the migrating Indians. These conditions and their unfortunate effects lingered for years among the Cherokees.<sup>65, 66</sup> The assumption appears sound, therefore, that the psychological and physical stresses associated with the enforced removal contributed importantly to the uninhibited behavior, social turbulence, factional hatred, and the chain of vindictive murders which continued through the ensuing decades. A similar story could be told about other American Indian tribes and, indeed, about many undeveloped nations when they met and lost to dominant civilizations bearing new customs and diseases. The health of its men controls the course of a nation. □

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## OSMA-Blue Shield Relations Under Study

Relations between the OSMA and Oklahoma Blue Shield are being re-studied by the association's Prepaid Medical Care Committee in conjunction with the Board of Trustees. The committee met on January 25th with a group of Blue Shield officers and board members to discuss a number of problems.

Following the committee meeting several recommendations were drafted and submitted to the OSMA's Board of Trustees for consideration at its February meeting. One recommendation was that the board urge Oklahoma Blue Shield to improve their claims processing ability. Physicians have complained of long delays between the filing of a claim and final payment.

During the committee meeting Windham Hill, Blue Shield vice-president, acknowledged that Blue Shield was not pleased with its performance in the prompt handling of physician's claims. He stated that during the period 1967-69 there was a 17 percent increase in Blue Shield subscribers and a resulting increase in claims volume. Payments to physicians have increased over 44 percent and now amount to nearly \$1 million a month. The tremendous growth in Blue Shield and Blue Cross has necessitated a 150 percent increase in staff personnel and a significant building expansion program.

Hill also told the committee that Oklahoma Blue Shield and Blue Cross was converting from a manual claims processing method to a sophisticated computer system. He said that some claims delay was due to the change-over and the difficulties encountered in training new personnel and in communicating with the profession.

Composition of the Oklahoma Blue Shield Board of Trustees came under attack because of a recent change. Previously the Oklahoma board has been composed of nine physicians and nine consumers. However, when Blue Shield started laying plans to

pay for dental services the composition was changed to nine physicians and three dentists on the professional half of the board, and an addition of three laymen on the consumer side.

Blue Shield bylaws provide that one-half of the board must be physicians.

The Tulsa County Medical Society adopted two resolutions opposing recent actions by Blue Shield. The OSMA Prepaid Medical Care Committee voted to recommend to the OSMA Board of Trustees that the previous Blue Shield Board be re-instituted if the current Blue Shield Board composition is found to be illegal by the OSMA legal counsel; and, if the composition of the new board is found to be legal, the committee recommended to the OSMA Trustees that Blue Shield be requested to amend its bylaws to provide that "physicians" are "doctors of medicine licensed to practice in the State of Oklahoma."

In lieu of the Prepaid Medical Care Committee's recommendations, the OSMA Board of Trustees simply requested that "50 percent of the Blue Shield Board of Trustees be doctors of medicine licensed to practice in the state."

During the January meeting the Prepaid Medical Care Committee also discussed with the Blue Shield leadership various difficulties in implementation of the UCR payment concept.

During the discussion it was pointed out that the OSMA House of Delegates in 1968 had adopted a report of the Council on Socio-Economic Activities of the association which would establish policy to be followed by a Blue Shield UCR program in Oklahoma.

The policy stated that the purpose of the usual, customary and reasonable (UCR) program is to provide a mechanism whereby Blue Shield could pay the reasonable charge of the physician for a covered service

while still demonstrating to the public a reasonable safeguard against unlimited liability. The report went on to define the terms "usual, customary and reasonable" and set out a method for determining what UCR fees should be.

*Usual charge* was defined as referring to the amount which the individual physician usually and most frequently charges all his patients for a specific professional service. *Customary* relates to the range of usual charges made by physicians of similar ability and experience for the same service within the specific socio-economic area. *Reasonable charge* is that charge which meets both the usual and customary criteria as defined above, or is justified due to complexity of treatment which merits special consideration.

One member of the Prepaid Medical Care Committee pointed out that the 1968 policy contained conflicting definitions as to how a "customary" charge would be determined. In one section it stated "customary relates to the range of usual charges made by physicians of similar ability and experience for the same service . . ." while in another portion of the report it states, "customary fees: a range of fees is compiled for each of the services performed and reported by the individual doctors within a given area . . ." It was pointed out that this second definition makes no provision for the specialist.

Following the discussion it was the committee's recommendation to the Board of Trustees that the House of Delegates be asked to amend its 1968 policy statement to clarify inconsistencies in the definition of "usual, customary and reasonable." Specifically, it was recommended that one section of the policy statement be amended to read: "A range of fees is compiled for each of the services performed and reported by



the individual doctors of similar ability and/or experience within a given area which will assume the optimum level of paid-in-full benefits. This range will be established to accommodate a minimum of ninety percent of the services in a given socio-economic area."

The Board of Trustees accepted this recommendation with one change. It was the board's feeling that the phrase "paid-in-full" should not be included in the definition. The new definition, without the phrase, will be submitted to the OSMA House of Delegates for its consideration during the May Oklahoma City annual meeting.

#### Claims Procedure Detailed

The UCR program approved by the House of Delegates in 1968 carried the unique provision that Blue Shield would delegate the final decision on fee determination to state and county medical society claims review committees. Blue Shield staff and Blue Shield appointed medical advisory committees can determine that a questioned claim can be paid, but only medical organization committees can reduce a payment as being outside the definition of "usual, customary and reasonable."

OSMA-Blue Shield's joint effort to develop a UCR program was an outgrowth of a \$28,000 survey of medical economic problems within the state. The survey revealed that less than 60 percent of Oklahoma's population was covered by medical-hospital insurance and that coverage benefits were inadequate. For instance, the survey report revealed that health insurance covered only 68.8 percent of physicians' fees during periods of hospitalization and only 59.2 percent of fees during a complete spell of illness requiring hospitalization. In addition, well over 60 percent of some 1,500 hospitalized patients who were surveyed said they wanted more health services insured and a higher percentage of actual charges covered.

The House of Delegates felt that the UCR concept would be useful in meeting public needs and in thereby

bolstering the private sector of health care financing.

Despite the House of Delegates' action elements of organized medicine are now expressing concern about offering paid-in-full benefits through a prepayment program, and this concern about the UCR concept has been compounded by delays in Blue Shield claims processing and by the alteration in composition of the Blue Shield Board of Trustees.

Complete copies of the UCR program approved by the House of Delegates are available from the OSMA office to any individual physician on request. □

### Association of Blood Banks to Meet In Houston

The 12th Annual Meeting of the South Central Association of Blood Banks will be held in Houston on March 12th-14th, 1970 at the Rice Hotel. Any member of the medical profession, administrative or technical personnel, and others interested in blood banking are invited to register.

On Thursday morning, March 12th, an Administrative Workshop will be presented, chaired by E. Richard Halden, Jr., M.D., Medical Director, Carter Blood Center, Fort Worth, Texas.

On Thursday afternoon, March 12th, the SCABB Committee on Technical Workshop will present a seminar which will feature a panel of distinguished experts. Case histories will be presented by the seminar moderator. A seminar manual will be provided.

Among some of the outstanding speakers who will participate in the program are: William Pollock, Ph.D., of Ortho Research Foundation, Raritan, New Jersey; Carlos Ehrich, M.D., of the New York Blood Center, and Peter Issett of Spectra Biologicals, New York City.

A complete program for the three-day meeting may be obtained by writing Mrs. Elsie Howard, Executive Secretary, South Central Association of Blood Banks, 2109 Commerce Street, Dallas, Texas 75201. □

### Smith and Mock Assume New Medical Center Duties

Philip E. Smith, Sc.D., associate dean of student affairs at the University of Oklahoma School of Medicine for nearly ten years, recently assumed the position of dean of the new University of Oklahoma School of Health Related Professions.

Succeeding him in the medical school associate deanship is David C. Mock Jr., M.D., formerly assistant dean of medical student affairs.

The School of Health Related Professions is now in the process of development at the Medical Center.

Doctor Smith, a member of the OU medical school faculty since 1952, retains the post of associate dean of the OU Graduate College and holds the academic titles of professor of parasitology in the School of Medicine and professor of laboratory practice in the School of Health. He received his doctor of science degree from the Johns Hopkins University School of Hygiene and Public Health, Baltimore, in 1949.

Doctor Mock, a graduate of Hahnemann Medical College, Philadelphia, took his residency training in internal medicine at the Community Hospital of San Mateo County, California, and at the OU Medical Center before joining the OU faculty in 1956. He became assistant dean in 1966. □

### Resolutions Received By The Journal

Tributes acknowledging the loss by the medical profession and the faculty of the University of Oklahoma School of Medicine by the deaths of four of its members have been received by *The Journal* from the Committee on Resolutions of the OU Medical Center.

Copies of the resolutions honoring Charles A. Smith, M.D., Everett S. Lain, M.D., Elmer Musick, M.D., and Maurice L. Peter, M.D., all OU Faculty members, have been sent to their relatives with sympathy and a desire to share their mutual loss. □



## Rubella Sunday Overwhelming Success



David Bickham, OSMA Associate Executive Director (left), Barbara Embree, Oklahoma State Health Department and Armond H. Start, M.D., Chairman of the OSMA Immunization Committee, are shown looking at one of the "Rub Out Rubella" posters.

"We have rubbed out rubella in Oklahoma!" These were the words used to describe the success of the Rub Out Rubella Campaign in Oklahoma. Over 200,000 Oklahoma youngsters were immunized on Sunday, February 1st, in a statewide campaign.

Immunization clinics were scattered throughout the state of Oklahoma and most opened on Rubella Sunday between noon and 1:00 p.m. Many of them were completely out of vaccine as early as 2:30 p.m.

According to Armond Start, M.D., Chairman of the OSMA Immunization Committee it was evident as early as 1:00 p.m. that the Rub Out Rubella Campaign was going to be an overwhelming success. Start said, "We had no idea the response would be this great. They over-

whelmed us. We were out of the ball park at 3:00 . . ."

A total of 200,000 doses of vaccine were distributed throughout the state prior to the opening of the clinics on Sunday with an additional stockpile of 23,000 doses in Oklahoma County for emergencies. This stockpile was depleted by 3:30 p.m. on Sunday and calls were coming in from clinics all over the state seeking more vaccine. National Guard airplanes and helicopters, Oklahoma City police, highway patrol cars, and members of a sports car club assisted in moving the emergency supplies of the vaccine throughout the state.

County physician-coordinators started readjusting the supply of vaccine early in the afternoon. When it became evident that one clinic had more vaccine than it needed, supplies

were moved to other clinics which were running out. County lines were disregarded as supplies of the vaccine were transferred from county to county on a need basis.

R. LeRoy Carpenter, M.D., State Epidemiologist, predicted that it would have been possible to have given 300,000 doses of the vaccine if it had been available. All physicians and staff personnel connected with the campaign admitted that they had been pessimistic from the start about the turnout.

OSMA's staff coordinator was David Bickham, Associate Executive Director for the association. He said, "During the past four months I have been repeatedly depressed and elated over the progress that we were making toward Rubella Sunday. If it had not been for the constant enthusiasm and dedication of Doctor Armond Start, I don't think we could have gotten the program off the ground." □

## American Fertility Society Offers Postgraduate Course

The American Fertility Society is announcing its Third Postgraduate Course in conjunction with the Annual Scientific Meeting to be held at the Washington-Hilton Hotel, Washington, D.C., March 18th, 19th and 20th, 1970.

Members and non-members are invited to participate in this review and educational program. The course will be offered in eight seminars with nationally and internationally known moderators participating and leading each session.

Additional information may be obtained by writing to The American Fertility Society, 944 South 18th Street, Birmingham, Alabama 35205. □

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## Fifteen Don'ts For Narcotics Safety

The Federal Bureau of Narcotics has prepared *Don'ts for the Practitioner* to protect him from narcotic addicts and abusers.

*Don't* leave prescription pads around; addicts may be forgers.

*Don't* write a narcotic prescription in lead pencil, or any prescription at all in pencil as they may be changed to call for morphine.

*Don't* write narcotics as "Morphine HT ½ # X" or "Morphine HT ¼ # 10." Several X's or zeroes can be added to raise the amount. Use brackets or spelling.

*Don't* carry a large stock of narcotics in your bag. Addicts are often watching M.D.'s offices and cars.

*Don't* store your office narcotic supply unprotected, especially near a sink or washroom; patients may ask to use these facilities.

*Don't* fall for a story from a stranger claiming an ailment that usually requires morphine. The addict can produce blood sputum, simulate bad coughs or other symptoms. Make your own diagnosis.

*Don't* give a prescription to anyone except the actual patient. Addicts have posed as nurses.

*Don't* write for large quantities of narcotics unless unavoidable. Diversion to addicts is profitable, as much as \$1 for ¼ grain M.S.

*Don't* prescribe narcotics on the story that another physician has been doing so; consult that physician or hospital records.

*Don't* leave prescriptions signed in blank for nurses to fill in; many have been stolen by addicts.

*Don't* treat an ambulatory addict. They must be under proper control; may go to several physicians at one time.

*Don't* dispense narcotics without keeping records, although bedside and office administration is permissible.

*Don't* buy your office narcotic needs on a prescription blank. The law requires that you use an official order form.

*Don't* resent a pharmacist's call

for verification of a prescription. He is held responsible if forgeries are filled.

*Don't* hesitate to call an agent of the Federal Bureau of Narcotics (at your nearest Federal Building) or the Narcotics Division of your State Department of Health if the patient is suspect. Your information will be held in strict confidence.

Do not phone in a *Class A Narcotic* prescription except in true emergencies; even then, the pharmacist

must have a written prescription in his or his agent's hand before he can make delivery to your patient. The pharmacist or his agent may pick up the prescription at your office or at the home before making delivery.

Violations of this section of the narcotic law may entail two to ten years imprisonment and up to \$20,000 fine for the first offense; second and third violations are more severe. ☐

## Legislative Doctor's Office Busy



C. Riley Strong, M.D., checks the blood pressure of Representative Martin Odom, Hitchita, Oklahoma, during his service as Doctor of the Day for the Oklahoma Legislature. Doctor Strong is coordinator for the project for both the OSMA and the Oklahoma Chapter of the AAGP.

Since the opening gavel of the second session of the 32nd State Legislature was sounded on January 6th, twenty-four Oklahoma physicians have served as Legislative Doctor of the Day. The program to furnish a licensed M.D. for the members of the House and Senate is jointly sponsored by the OSMA and the Oklahoma Chapter of the American Academy of General Practice.

A well equipped and stocked examining room is provided for the doctor on the fourth floor of the state capitol building between the House and Senate chambers. The Oklahoma State Nurses Association furnishes a registered nurse to work with the physician each day. Supplies for the

examining room have been donated by surgical supply houses and pharmaceutical companies.

Both the doctor and nurse of the day are given an unusual privilege by the two houses of the state Legislature. Both are given the privilege of the floor, which means they are allowed to enter the chambers while the legislature is in session.

The Doctor of the Day is asked to arrive at the office by 9:30 in the morning and to remain in the capitol building until the legislature adjourns for the day. During the day he will see about 12 to 15 patients, most of whom suffer from flu and cold symptoms. ☐





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## TB Group Launches Lung Research Program

The Oklahoma Lung Research and Development Program, initiated on August 1st, 1969 as a result of several months of intensive study by a special committee of The Oklahoma Tuberculosis and Respiratory Disease Association has been endorsed by the OSMA Board of Trustees. The committee, chaired by Edward R. Munnell, M.D., Oklahoma City chest surgeon, and composed of a cross-section of physicians and laymen, was vitally concerned with the rising incidence of emphysema, chronic bronchitis, asthma and other lung-crippling diseases, and felt quite strongly that an Oklahoma-based program of research and medical education should be initiated to cope with this problem.

Funds contributed to the Oklahoma Lung Research and Development Program by the citizens of Oklahoma will be used to finance six major categories of research and medical education, namely: emphysema, chronic bronchitis, asthma, tuberculosis, air pollution, and smoking.

The program will be financed through memorials, bequests, and special gifts.

James F. Hammersten, M.D., Head of the Department of Medicine, University of Oklahoma Medical School states, "There is an urgent need—in the state of Oklahoma—for a mechanism like the Oklahoma Lung Research and Development Program—a program which will give even greater emphasis to the prevention of respiratory disease among the citizens of our state and one which is designed to bring about the early diagnosis, effective treatment, and rehabilitation of the patient with respiratory diseases. I feel the Oklahoma Lung Research and Development Program is an effective way to focus the attention of all Oklahomans, both the medical profession and the man on the street—upon the critical problems associated with emphysema, chronic bronchitis, asthma, tuberculosis and other re-

## OU Basic Science Building Dedicated



Two 175-seat lecture halls open off this spacious lobby of the new Student Basic Science Education building dedicated January 27th at the University of Oklahoma Medical Center.

A \$4 million Student Basic Science Education Building was dedicated January 27th at the University of Oklahoma Medical Center.

Home base for first and second year medical students, the new structure has made it possible to increase the size of the entering class in the School of Medicine from 104 to 126 students, James L. Dennis, M.D., OU vice president for Medical Center affairs, said. The first freshman class totaling 126 was admitted last fall.

Opening of the basic science building marked the completion of the first project in the master plan for

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lated respiratory diseases."

The program has already gained nationwide attention, according to Mr. John Rogers, Executive Secretary.

Among the projects currently sponsored by the Oklahoma Lung Research and Development Program is the sponsorship of the Chair of Pulmonary Disease at the University of Oklahoma Medical School. Education of physicians, nurses and other health personnel is a priority concern of the Oklahoma Lung Research and Development Program. □

an Oklahoma Health Center which will have the present OU Medical Center as its nucleus.

The Oklahoma Health Center is planned as a 200-acre, \$185 million complex of public and private institutions. Another lead project in the development, the first 200-bed, \$11,959,000 unit of a new University Hospital, is under construction and scheduled for completion in 1972.

The two and one-half story Student Basic Science Education Building was designed for multidisciplinary teaching.

It houses 18 multidisciplinary laboratories, in which each student is assigned his own work area. Each laboratory has space for 16 students.

Facilities also include two 175-seat lecture halls, a student lounge and courtyard, service areas and office space.

Funds for construction and equipment were provided by a \$2,175,383 federal grant under the Health Professions Educational Assistance Act and a portion of bond funds voted by Oklahomans in 1963.

Governor Dewey Bartlett, Dean A. McGee, Oklahoma City industrialist and chairman of the Oklahoma Health Sciences Foundation, and university officials participated in the dedication program. □



## LEGISLATIVE DIGEST

The OSMA's Legislative Committee has taken a position on a number of bills pending before the second session of the 32nd Oklahoma Legislature. The following is a brief explanation of each bill, giving the OSMA position.

**HB 1022 by Sparkman:** Commonly referred to as the Oklahoma Medical Laboratory Licensure Act, this bill was drafted by ten allied health organizations over a period of almost a year. It establishes minimum standards for laboratories and laboratory personnel. The bill passed out of the House Committee on Public Health with a recommendation of "Do Pass" and is currently pending in the House Appropriations and Budget Committee. *The OSMA supports this legislation and urges all physicians to contact their representatives and encourage them to support the bill.*

**HB 1033 by Sparkman:** This is a companion bill to HB 1047 and appropriates a million dollars for the operation of county, district and co-operative city-county departments of health. It has passed the House of Representatives and is pending action in the Senate. *The OSMA supports this bill.*

**HB 1047 by Sparkman:** An act relating to public health and expanding the existing county boards of health and authorizes the commissioner of health to establish health districts and district boards of health. *The OSMA supports this bill.*

**HB 1143 by Derryberry:** This is one of several bills to amend existing workmen's compensation laws in Oklahoma. This one would require that upon written request the employer may provide an injured employee with treatment by prayer or spiritual means in lieu of medical treatment. *The OSMA does not approve this amendment of the existing law.*

**HB 1144 by Derryberry:** Another addition to the existing workmen's compensation law, this bill creates a medical panel to be used by the state industrial court to review cases

where there is a divergent medical testimony. The panel would be selected by the court from a list of physicians submitted by the OSMA. *The OSMA assisted in the drafting of this legislation and supports its passage.*

**HB 1150 by Derryberry:** Another of the workmen's compensation bills, this one provides that an employee or prospective employee who has a chronic ailment or disease may waive his compensable rights for that condition. Many persons having such disabilities are capable of working but cannot find jobs because the employers are reluctant to hire them. The bill protects the employee and provides that such rights can only be waived after a medical examination and with the approval of the industrial court. *The OSMA supports this bill.*

**HB 1357 by Converse:** This legislation, if passed, would require students entering medical school to enter into a written agreement with the state regents for higher education promising to practice for two years in towns of under 6,000 population upon completion of their medical school and internship. It makes this agreement one of the requirements for acceptance of an application in the university school of medicine. The bill is currently in the House Education Committee and is *opposed by the OSMA.*

**HB 1363 by Spearman:** This is a bill to license opthalmic dispensers in the state of Oklahoma. It defines "ophthalmic dispenser" as one who prepares and dispenses lenses, spectacles, eye glasses, contact lenses, and optic devices for the intended user thereof on the written prescription of a person duly licensed to practice medicine, osteopathy, or optometry in Oklahoma. It provides minimum standards for a person to be licensed under the act and that such licensure shall be granted by the State Board of Medical Examiners. *The Legislative Committee of the OSMA has this bill under study.*

**HB 1369 by Finch:** This bill would give an insured patient their right to select any practitioner of the healing arts to treat him. *The OSMA*

*opposes this bill since it would force insurance companies to pay for treatment by chiropractors.*

**HB 1410 by Cox:** This is an act relating to mental health in providing a mechanism for the temporary hospitalization of a person in need of psychiatric treatment. It allows a judge of the district court to send such a person to a hospital for ten days on the basis of a petition and a statement from at least one physician attesting to the fact that the person named is in need of immediate care. The bill is currently pending in the house Judiciary Committee and *the OSMA supports this legislation.*

**SB 114 by Martin:** This is a bill to change the present makeup of the State Board of Health to include a pharmacist and a dentist. It does not diminish the representation of physicians or enlarge the board. This bill has passed the Senate and is currently pending in the House Committee on Public Health. *The OSMA supports this legislation.*

**SB 468 by Stansberry:** This bill provides that any licensed M.D. or D.O. in the state of Oklahoma shall automatically have hospital privileges in any hospital receiving any public funds. In effect the bill says that every physician has staff privileges in every hospital in the state. *Both the OSMA Legislative Committee and the Oklahoma Hospital Association have gone on record as opposing this bill.*

**SB 518 by Baldwin:** This bill would amend the medical practices act to provide for the licensure of foreign medical graduates who are not citizens of the United States. The act would allow the Board of Medical Examiners to license such a person if they had reason to believe that he possessed the necessary professional qualifications, "through recognized postgraduate work done in this country, or through professional experience, or both, which have given him premedical training substantially equivalent to that offered in the premedical course at the University of Oklahoma, or professional training substantially equivalent to that of the medical school of that uni-



versity, . . .” Upon such a finding by a majority of the board the educational prerequisites may be waived and the applicant admitted to examination. The act goes on to give the board authority to conduct an extensive inquiry into the educational qualifications of the foreign graduate. It further states that, “in lieu of the foregoing inquiry into the premedical and medical qualifications of such an applicant the board may accept, either in whole or in part, the marks received by such applicant in examinations conducted by the educational council for foreign medical graduates.” The bill then sets out the fees that may be charged by the board for making such an inquiry. The bill was introduced in the State Senate in early February and *is currently under study by the OSMA Legislative Committee.* □

### Adolescent Clinic Opened

An Adolescent Clinic has been organized at the University of Oklahoma Medical Center. The clinic is currently located in the Clinic Annex of the Children’s Memorial Hospital, 800 N.E. 13th Street, Oklahoma City, Oklahoma.

By utilizing the talents of consultants from several medical center departments the clinic will provide comprehensive evaluation for selected adolescent patients. Particular emphasis is given to developmental disorders, those of sociologic adjustment and related problems. Patients may be referred through physicians, schools and other agencies. Self referrals will also be accepted. Appointments may be arranged by contacting Doctor R. Lee Austin or Doctor Harriet Coussons, Department of Pediatrics, Children’s Memorial Hospital, University of Oklahoma Medical Center, 236-1366, Ext. 173. □

### Fifty Year Club Seeks Members

The Fifty Year Club of American medicine is seeking members. At the present time there are approximately 300 members in this club across the United States. Davis W. Goldstein, M.D., Secre-

tary-Treasurer of the organization, contacted the OSMA and asked if any of our state association fifty year members would be interested in joining the national organization. Dues in the Fifty Year Club are \$5.00 per year and membership is limited to those physicians who have been in practice for fifty years or more. Each year during the AMA meeting the Fifty Year Club has a luncheon at the headquarters hotel with a speaker of general interest to all members.

Physicians interested in this club should contact Doctor Davis W. Goldstein, Secretary-Treasurer, in c/o 100 South 14th Street, Fort Smith, Arkansas 72901. □

### Midwest Cancer Conference Set

The Kansas Division of the Ameri-

can Cancer Society is sponsoring the 22nd Annual Midwest Cancer Conference April 10th and 11th, 1970 in the Broadview Hotel in Wichita, Kansas. Guest speakers will be John J. Holland, Ph.D., La Jolla, California; Loren J. Humphrey, M.D., Atlanta, Georgia; Robert V. P. Hutter, M.D., New Haven, Connecticut; A. L. LeBlanc, M.D., Galveston, Texas; William C. Moloney, M.D., Boston, Massachusetts; and Eleanor D. Montague, M.D., Houston, Texas and Robert F. Ryan, M.D., New Orleans, Louisiana.

All physicians are invited to attend the two-day graduate course on “Cancer and Its Clinical Management.” There is no registration fee and A.A.G.P. credit has been granted. □

### DEATHS

C. M. HODGSON, M.D.  
1903-1970

C. M. Hodgson, M.D., Speaker of the House of Delegates of the Oklahoma State Medical Association, died in Kingfisher, February 2nd, 1970.

Born in Omega, Oklahoma Territory, on March 10th, 1903, Doctor Hodgson was graduated from the University of Oklahoma School of Medicine in 1927.

A Kingfisher general practitioner for many years, Doctor Hodgson had been quite active in both medical and civic affairs. He was active in his county medical society and had served as Vice-Speaker of the House of Delegates before assuming duties as Speaker in 1964. He was a vice-chairman of the Professional Advisory Committee for Medical Care for the Department of Public Welfare.

He was a life member of the Southern Medical Association, a member of the Oklahoma Chapter of the American Academy of General Practice and an alumni advisor to the Alpha Sigma Phi.

STEARLEY P. HARRISON, M.D.  
1913-1969

An Ada physician since 1951, Stearley P. Harrison, M.D., died December 27th, 1969.

Born in Oklahoma City, Doctor Harrison graduated from Northwestern University Medical School in 1941. Following his military service in World War II, he practiced for a while in Oklahoma City before moving to Ada in 1951, where he specialized in internal medicine.

Doctor Harrison was active in the medical profession, having served as president of the Pontotoc County Medical Society, and was a member of the Board of Directors of the Oklahoma Heart Association at the time of his death.



EVERETT S. LAIN, M.D.

1876-1970

A prominent, retired Oklahoma City physician and past-president of the OSMA (1924-25), Everett S. Lain, M.D., died January 11th, 1970.

A native of Denton County, Texas, Doctor Lain graduated from Vanderbilt University School of Medicine in 1900. Following a short period of general practice in Weatherford, Oklahoma, he went to Chicago and New York for postgraduate work in dermatology, x-ray and radium therapy, coming to Oklahoma City in 1908. He was a member of the original faculty of the University of Oklahoma School of Medicine where he was a professor of dermatology from 1910 until 1945 when he was named professor emeritus. He was a widely known dermatologist, having practiced 56 years before retiring.

Doctor Lain was a past-president of the Oklahoma County Medical Society, a member of the American Dermatological Association, the Academy of Dermatology, the Southern Medical Association, the American College of Physicians and the American Radium Association. He was one of the founders and a member of the first Board of Directors of the Oklahoma Medical Research Foundation and had served as chairman of the Oklahoma Chapter of the American Cancer Society from 1936 to 1947.

He had received dual honors from the OSMA—a Fifty Year Pin in 1950 for over a half century of services to his profession and humanity and an Honorary Life Membership in 1951.

*Who's Who in America* had listed Doctor Lain since 1940 and he was a member of the Oklahoma Hall of Fame.

E. M. LOYD, M.D.

1878-1970

A pioneer Taloga physician, E. M. Loyd, M.D., died in Weslaco, Texas, January 8th, 1970. Doctor Loyd graduated from the University of Tennessee College of Medicine in 1907. He moved to Harlingen, Texas in 1940.

In 1948 the Oklahoma State Medical Association honored Doctor Loyd with the presentation of an Honorary Life Membership in recognition of his service to his profession and humanity.

FULLER ALBRIGHT, M.D.

1900-1969

Fuller Albright, M.D., died on December 8th, 1969, after a prolonged disability with Parkinson's disease. At the memorial service in the Massachusetts General Hospital, Doctor Philip Henneman gave the address. This was followed by words from Professor J. S. L. Browne and Mr. Read Albright.

Professor Emeritus of Medicine at the Harvard Medical School, from which he graduated in 1924, Doctor Albright was famous as a clinical investigator in the fields of endocrinology and bone disease. His 1948 monograph with E. C. Reifenshtein, Jr., "The Parathyroid Glands and Metabolic Bone Disease," is a classic. Even more important than his many brilliant publications was the influence over his research students, co-workers and investigators throughout the world, many of whom were stimulated to pursue their research problems with fresh insight.

Fuller Albright influenced many in this part of the nation. Doctor Reifenshtein, the first Director of the Oklahoma Medical Research Foundation, brought several former associates from Albright's metabolic research ward to Oklahoma City. These, and all who felt his inspiration at meetings of the American Society for Clinical Investigation, the Endocrine Society, or other associations, will mourn and join in sympathy for the brave Claire and their sons, Birge and Read.—R. Palmer Howard, M.D. □

**PEDIATRICS.** By Henry L. Barnett and Arnold H. Einhorn. 14th Edition. New York: Appleton-Century-Croft, 1968. 1847 pp. \$24.50.

Another classic has lost the original name since Holt does not appear on the title page of this edition. The 13th (1962) edition carried the name of Holt, McIntosh and Barnett and the 14th has Barnett and a collaborator, Einhorn. In making this transition, the editors reoriented the text to permit incorporation of the growing specialization within pediatrics. Changes in the provision of child health services have also been reflected in the rearrangement. While the text contains a substantial amount of case history material, emphasis on the underlying mechanisms has been increased.

The 14th edition of this well-known and time-honored volume is presented in such an extensively revised format as to constitute a new textbook. Perhaps the key innovation is the introduction of 18 well selected associate editors to supervise the development of each major section and the presentation, at the beginning of each section of physiologic principles pertinent to the understanding of the organ system or disease under discussion. The associate editors in turn have selected individual topic authors who also utilize physiologic and anatomic principles to develop their material. There are a number of new sections and certain old ones which have been revised and regrouped into more functional relationships. Some of these include Health and Community Pediatrics, Perinatal Pediatrics, and Disorders of Acid Base and Electrolyte Metabolism. Virtually all sections show evidence of editorial revision and the reader will find it convenient to refer to the index frequently when seeking specific information, since many familiar groupings are changed. Each section is followed by a carefully selected bibliography, an excellent resource for the student who wishes to go beyond the necessarily limited scope of the textbook. There is liberal use of tables for summary of differential



diagnosis or treatment plans and several color photographs complement the extensive use of more traditional black and white illustrations. In addition to the 18 associate editors, there are 34 chapters composed by 138 topic-authors making this an excellent and authoritative resource for physicians who care for children.

The editor and his associates have created a text which is very readable and one which really accomplishes the editor's goal of "recognition of broad alteration taking place in pediatric knowledge, practice and methods of delivery of health care." This new book represents an important milestone and is to be highly recommended.—*Harris D. Riley, Jr., M.D.*

**SICKNESS IN SOCIETY.** By Raymond S. Duff, M.D., and August G. Hollingshead, Ph.D., 390 pp., New York: Harper and Row, 1968. \$12.50.

This is an account of the many details of hospitalization which is totally different from any other yet published. It is a disturbing, controversial but significant book. It describes, in minute detail, the results of a five-year study of 225 patients between the ages of 40 and 64 hospitalized in an eastern university medical center.

Rather than attempt to write a detailed review of this book, I suggest that interested readers see the article which appeared in *Harper's*, July 1968 entitled "The Arch-Hospital: An Ailing Monopoly" by Franz J. Ingelfinger, M.D., Editor of *The New England Journal of Medicine*. He provides an excellent critique of all aspects of this interesting and provocative book.—*Harris D. Riley, Jr., M.D.*

**CURRENT THERAPY, 1968.** By Howard F. Conn, M.D. W. B. Saunders Company, Philadelphia, 1968, 898 pp. \$14.00.

The title of this book, and the fact that it appears annually, indicates that it is popular with practicing physicians. There are probably few

who are not aware of it, and have not used it. This volume is so standard in common usage that all the reviewer need do is to remind the readers that it is time to purchase a new edition.—*Harris D. Riley, Jr., M.D.*

**INFECTIOUS DISEASES.** Edited by Aidan Cockburn. C. C. Thomas, Publisher. Springfield, Illinois, 1967, 391 pp. plus 10 pp. index. \$18.50.

This book presents a unique compilation of the history of various infectious diseases from early time to the present day. It describes the interrelationships of man, micro-organisms, their environment and infectious diseases from their origin to the present. The influence of culture, natural resistance or susceptibility to infection, vectors, population migration, urbanization, the industrial revolution and travel are presented and discussed in the first part of the book. The basic principles of eradication and control of infectious diseases are presented along with detailed discussions of successful programs in the control of smallpox, malaria, poliomyelitis and other diseases.

The book terminates abruptly in two rather long chapters concerning insecticides and infections of domestic animals in the United States. It is somewhat disappointing that from 22 chapters, numbering more than 400 pages, written by 24 international experts, there is little presented in terms of new concepts.—*Harris D. Riley, Jr., M.D.*

**FOR FUTURE DOCTORS.** By Alan Gregg, M.D. University of Chicago Press, 165 pp., 1967. \$1.50.

This small book is a delightful collection of essays by Doctor Alan Gregg, a physician, who for some 21 years directed the Medical Science Division of the Rockefeller Foundation. In this capacity he was widely known to thousands for the invaluable help he gave medical research and education through his wise guidance of the Rockefeller Foundation and its distribution of funds. This

collection of lectures offers young men and women, preparing to become physicians, a stimulating and lively introduction to the medical profession, challenges established members of the profession to a new enthusiasm and a heightening of aspirations and provides friends of the profession with an interesting insight into both its problems and responsibilities. He speaks of such basic matters as creativeness in medicine, the dangers of provincialism and the problems of language and communication. All physicians will find the lecture entitled "Language and the Practice of Medicine," and that "On the Reading of Medical Literature," worthy of reading.—*Harris D. Riley, Jr., M.D.*

**NEW ASPECTS OF HUMAN GENETICS.** British Medical Journal, 25, no. 1, 1969.

This issue of the British Medical Bulletin is worthy of comment even for this finely produced periodical. Professor Polani's wide ranging review of autosomal imbalance syndromes, Dean's detailed review of the porphyrias and the discussions of Carter and Edwards on the problems of polygenic inheritance and the threshold phenomena will be of interest to many physicians.—*Harris D. Riley, Jr., M.D.*

**THE BATTERED CHILD.** By Katherine B. Oettinger. Edited by Ray E. Helfer, M.D. and C. Henry Kempe, M.D. 2nd Printing. Chicago: The University of Chicago Press, 1968, 268 pp. \$12.50.

Several years ago, Doctor C. H. Kempe, Professor of Pediatrics at the University of Colorado, coined the term "The Battered Child Syndrome" to refer to children who had been physically abused. This book, edited by Helfer and Kempe, is a collaboration by a number of workers. It is a concise detailed, authoritative account of current knowledge in this area. A survey of newspaper reports in 1965 revealed that 130 children lost their lives to parental violence in a six-month period. The reports were admittedly incomplete and grossly understated the number



of deaths as well as non-lethal injuries. Popular awareness of the widespread nature of child abuse has increased tremendously in recent years and now all of the 50 states have passed laws providing for mandatory reporting of cases of suspected child abuse. However, the job is far from finished; the need for community follow-up services is

great.

This book is divided into four major portions: (1) History and incidence, (2) Medical aspects, (3) Psychiatric and social aspects, and (4) Legal aspects.

There is also an appendix which gives a summary of neglect in traumatic cases and a summary of child abuse legislation. The section on medical aspects gives an excellent discussion of responsibility and role

of the physician, not only to the child but to the parents and various agencies. Fred Silverman provides an excellent review of the radiologic aspects of this problem and J. T. Weston presents a comprehensive review of the pathology of child abuse.

All physicians and others who deal with children will find the time well spent reading this book.—*Harris D. Riley, Jr., M.D.* ☐

## Miscellaneous Advertisements

**DOCTOR'S LUXURY**, newly carpeted and redecorated home. Four bedrooms, four baths, music room; much more. Doctor will personally show by appointment only. Phone 843-5577.

**STAFF OF AESCULAPIUS FOR SALE.** Suitable for indoor or outdoor decoration. Metal, seven feet tall, \$50.00. Contact The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118. Call 842-3361.

**FOR SALE:** Well established suburban Oklahoma City practice. Same location for over 20 years. Limited amount of equipment and medical library included. Available immediately or by January 1st. Contact Key H, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

**FOR SALE:** Burdick EKG 111 (like new); Hamilton Examining Table; Hamilton Treatment Table; Stools. Phone (collect) Oklahoma City, 405 751-5292.

**WANTED: THREE PHYSICIANS:** One internist, board certified or board eligible for full-time assignment to Medical Service: One generalist for assignment to Outpatient Service duties; 390-bed general medical and surgical hospital; beginning salary \$18,531 to \$25,189 PA depending upon qualifications; approximately 20 percent additional fringe benefits including annual and sick leave; insurance and retirement plan. Non-discrimination in employment. Location is a superlative outdoor recreation area. Contact Chief of Staff, Veterans Administration Hospital, Muskogee, Oklahoma.

**WELL-ESTABLISHED INTERNAL MEDICINE PRACTICE** available, Pasteur Building, Oklahoma City; gross over \$40,000; three examining rooms plus office and reception; two excellent employees; fully-equipped office and reception areas; fluoroscope, EKG and other necessary equipment. Write Key G, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

**EXCELLENT PRACTICE** opportunity in Eastern Oklahoma community of 2,800 situated in a county with 13,000 population. General practice with no OB, grossing over \$90,000. Clinic building, reception furniture, and certain medical equipment available for approximately \$25,000 (depending on equipment desired). Qualified applicant would be acceptable on salaried basis. There is a new 36-bed hospital. Patient records are available on request for his established practice. Available now. Contact Key A, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

**PHYSICIAN, PROJECT DIRECTOR** for O.E.O. funded comprehensive health project, Tulsa, Oklahoma. Jointly sponsored by Tulsa County Medical Society and Health Department. Duties primarily administrative. Requires eligibility for Oklahoma license and experience or training in administrative principles. Salary negotiable to \$26,460. Contact —Doctor George Prothro, Director, Tulsa City-County Health Department, Tulsa, Oklahoma 74112, telephone AC-918 939-2671. ☐



Dear Auxiliary Members:



Mrs. Virgil Ray  
Forester

Daniel Webster has said, "We live in a most extraordinary age. Events so various and so important that they might crowd and distinguish centuries, are, in our times, compressed within the compass of a single life." Mr. Webster's remarks are even more pertinent today

than when he uttered them one hundred years ago. Change is the striking element of our time and nowhere is this more evident than in the field of medicine whose progress in the last several decades is unparalleled in man's history. More and more study and knowledge are required of today's physicians, and more and more, as their time is further limited, the responsibility of the physician's image rests with us, their wives and their auxiliary.

All of us welcome this responsibility, and with this in mind as we begin the 1970 year, let us remember that all of us by virtue of the fact that we are wives of physicians are emissaries of the medical profession; we are a vital part of medicine's diplomatic corps. In all that we do and say, in the multitude of situations that comprise the fabric of our daily lives, and in the great variety of areas in which we strive to serve, we are constantly challenged by the unique opportunity to function as ambassadors—as diplomats—titles that denote dedication, broad knowledge, great tact and skill.

Our auxiliary possesses great potentials. Ingenuity, careful planning and hard work will produce fantastic results in all fields of our endeavors. So, with eagerness and enthusiasm, we look forward to the opportunities and challenges of this new year 1970.

Let us consider the American Medical Association Educational Research Foundation.

What is AMA-ERF?

AMA-ERF seeks financial support from the nation's physicians, medical societies, the Woman's Auxiliary to the American Medical Association, philanthropic organi-

zations, business corporations and the general public.

The six fund-raising projects for AMA-ERF are:

The Institute for Biomedical Research,  
Financial assistance for medical schools,  
The loan guarantee program,  
Program in medical journalism,  
Research Project on tobacco and health,  
and

The categorical Research Grants Program.

The fastest growing crisis in fund raising for AMA-ERF is the plight of the medical schools.

Experts estimate that we will need at least 400,000 physicians by 1975—100,000 more than we now have in the United States. Students are being turned away from medical schools because of inadequate facilities to handle them.

Let us as women behind the great men in medicine promote this great cause.

Last year, the fifty state auxiliaries raised \$428,875 to be given to medical schools and to the Institute for Biomedical Research.

This year, emphasis on the loan guarantee program again looms all important.

Last November, Mrs. John M. Chenault, president of the Woman's Auxiliary to the American Medical Association, during dedication ceremonies of a new Child Study Center at the University of Arkansas School of Medicine, presented a check for \$9,027 to Winston K. Shorey, M.D., dean of the school.

Honoring the late Esther J. Long, immediate past president of the American Medical Association Auxiliary, the gift will be used to furnish a 120 seat auditorium in the new facility.

To share in medical achievements is to live in the moonglow of the sun—not a small reward.

Best in auxiliary,  
ZELLIE



Since Medicare began, three and one-half years ago, only two physicians have been convicted of fraud. During this time 2,500 cases have been investigated by the Social Security Administration. In a recent news release Commissioner Robert M. Ball said Medicare "pays about 30 million doctors' bills and 12 million bills from institutional providers for services each year. It is clear from our investigations that the number of attempts at fraud or abuse is relatively very small." The commissioner went on to say that about half of the cases investigated by the SSA resulted from clerical errors, misunderstandings or honest mistakes by physicians or health services. To date thirteen cases have been referred to the Justice Department for criminal prosecution for fraud. Five other cases have been referred with recommendations that several proceedings be started for the return of funds. He said thirty-five other possible fraud cases are being prepared. (Compare these numbers with those in the following paragraph.)

**As 1969 ended there were 328,366 U. S. physicians, and 219,570 were AMA members. Of the 199,997 physicians in private practice, 168,082 were AMA members.**

**Malpractice suit increase is a matter of universal concern.** The need to overhaul the existing system of professional liability insurance was clearly recognized in a recent meeting between the AMA staff and representatives of the American Insurance Association. Officials of the AIA, representing stock insurance companies, said they are anxious to explore new approaches in refinements. Premiums in 1970 for malpractice insurance coverage are expected to total approximately \$100 million. This is a 33 1/3 percent increase over the \$75 million doled out for such premiums in 1969.

**Speaking of malpractice, HEW Secretary Robert Finch** recently told members of the American Academy of Orthopedic Surgeons that he had a special insight into the problem because he supported himself on such suits during the early days of his legal prac-

tice. "I must say this is not the right approach," he commented, adding, however, that victims of professional negligence or maloccurrences must be fairly compensated. Last year the secretary appointed a special assistant to study alternatives to current methods of handling malpractice cases.

**President Nixon's veto of the HEW appropriation bill** caused an all-out lobby effort on the part of AFL-CIO, NEA and other groups to override the veto in the House of Representatives. Washington observers estimated that nearly 1,000 men and women were brought into Washington to specifically lobby for the override vote.

**Alaska and Arizona were the only two states beginning 1970 without Medicaid programs.** Seven states started new Medicaid programs on January 1st. These included Alabama, Arkansas, Florida, Indiana, Mississippi, New Jersey and North Carolina. Last year ten million persons received medical assistance under Medicaid. The seven new state programs will make an additional 1.7 million persons eligible to receive assistance.

**Sharply increased physician utilization** of nurses and other health professionals was endorsed during January by the AMA's Board of Trustees as a means of expanding patient care services under physician direction and increasing the effectiveness of health manpower. The board directed all AMA councils and committees to intensify their efforts to achieve this expansion of medical services.

**Average hospital bill for Medicare patients was \$700 at last report,** according to the Health Education and Welfare Department. This is a nationwide average. During 1970 the beneficiary will pay seven percent of the total bill, up from six percent in 1969.

**Physicians' fees for office visits have gone up 37.8 percent in the last five years,** just 1.3 percent more than baby-sitters fees, according to *U.S. News and World Report* (January 19). Dentist's fees for filling a tooth have risen 30.4 percent; men's haircuts, 32.9 percent; lawyer's fees, 33.4 percent. Showing greater increases than physician's fees are auto insurance, 38.1 percent; mortgage interest, 39.2 percent; replacing a sink, 40.2 percent; household workers, 44.7 percent; repainting a room, 50.4 percent.



of the Oklahoma State Medical Association

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in active stages of moderate to severe rheumatoid arthritis,

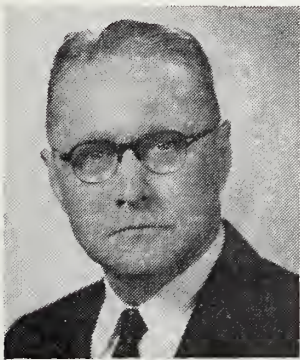
# What more can you

after you've tried





*"Mr. Speaker,  
We Respectfully Move . . ."*



That death is an ordained part of Nature's processes does not console us for the loss of Clella M. Hodgson, M.D., who died at Kingfisher, February 2nd, 1970. For comfort, we must turn to the totality of his living, and glimpse the life

force within him.

Many have known him through his twenty years of service to the state association and he was Speaker of the House of Delegates of the Oklahoma State Medical Association at the time of his death. Many have respected him for his sense of civic duty on the Kingfisher Memorial Library Board, and in a multitude of other community services. Many knew of his witty, studious mind, and held his tact and diplomacy in high regard. His many friends recognized his deep devotion to his family.

After serving 42 years as a physician, his patients' lives are his greatest memorial. Who can total the pain and fear he relieved? How many years of human life has his knowledge preserved? Who can measure the counsel he has taught in a lifetime of medical service? We must leave this arithmetic to the Supreme Being, and content ourselves that we served with him for a time, and learned from him.

*"Mr. Speaker, we respectfully move that you be commended for your lifetime of service to humanity. You have served honorably and well."*—Ray V. McIntyre, M.D. □

## *Oklahoma Lung Research and Development Program*

**DURING THE PAST** months the Oklahoma Tuberculosis and Respiratory Disease Association has developed a design for the future—a comprehensive plan of action. The new Oklahoma Lung Research and Development Program is the result of an intensive study by a special committee composed of a cross section of Oklahoma physicians and laymen who are vitally concerned with the

rising incidence of emphysema, bronchitis, asthma, and other crippling lung diseases.

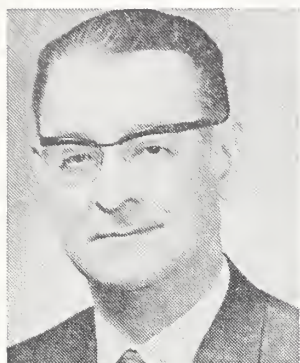
The Oklahoma Lung Research and Development Program will have three major sources of income: Memorials, bequests and special gifts. Through this program Oklahomans may more readily contribute to a greater understanding of the cause of pulmonary problems. Funds will be used to foster and support projects in the areas of: Professional Education, Public Education, Community Service and Research. The research will be basic, applied and clinical. Activities to be carried out in these designated areas are to be concerned especially with emphysema, with chronic bronchitis, asthma, tuberculosis and other pulmonary infections.

Among the projects currently being sponsored and supported by the Oklahoma program is the Chair of Pulmonary Diseases of the Department of Medicine at the University of Oklahoma School of Medicine. Furthermore, education of physicians, nurses and other health personnel in pulmonary problems is a priority current activity of the program.

Any individual, group or institution within Oklahoma is eligible to file a request for a grant for support of their work with the Oklahoma Lung Research and Development Program. Grant requests are received by the Executive Secretary, Mr. John G. Rogers, Oklahoma Tuberculosis and Respiratory Disease Association, 2442 North Walnut, Oklahoma City, Oklahoma 73105.

The Oklahoma Lung Research and Development Program has received the endorsement of the Board of Trustees of the Oklahoma State Medical Association; the Executive Committee of the Oklahoma Thoracic Society and its Medical Advisory Council; and the Board of Directors of the Oklahoma Tuberculosis and Respiratory Disease Association, Incorporated.—Edward R. Munnell, M.D. □





Just as the trees begin to bud, so do the ambitions of politicians.

In this off-presidential year there arrives again the opportunity to engage in political activity at all levels. Now is the time for physicians to reaffirm their roles as opinion makers . . . Now is the time to begin an effective movement toward better representation in the Congress and in the State Legislature.

This responsibility—this cherished right—cannot be carried out legally through the corporate form of the state medical association. But the American Medical Political Action Committee and its state constituent, OMPAC, are vehicles where small contributions from physicians and their wives and friends can be focused in a significant way on key legislative races.

Look about you at the trouble which has been politically inspired or motivated, or both.

The profession is being villified for abuse of government health programs (yet doctors receive only 22.6 percent of Medicare expen-

ditures as compared to receiving 23 percent of the general population's health care dollar) . . . Government planners are routinely wrong in estimating the cost of any program, including Medicare, Medicaid, the F-111, the C5A cargo plane, and you name it . . . Black Panthers are being eulogized on the one hand and pampered on the other . . . inciters of riot and their yippie friends are being hailed as national heroes while their trial judge is being investigated by the American Bar Association . . . the nation's capital is America's most unsafe city.

There are good men, of course, serving in government jobs and in elective offices . . . but not enough of them. The balance of power in the national legislative branch is playing havoc with America's physical, economic and emotional health.

Let's support OMPAC and AMPAC *now!* Let us not be like the television comedienne who recently said "Apathy is one of America's biggest problems, but then who cares?"

If you read this message, I think you'll agree that your future is worth a \$20 OMPAC-AMPAC membership. Send your check to OMPAC, P.O. Box 75341, Oklahoma City, 73107. ☐

Sincerely yours,

*Willard E. Denger*



## Studies of the Rubella Syndrome

W. M. THOMPSON, JR., M.D.  
E. D. THOMAS, M.D.  
L. A. CHITWOOD, Ph.D.  
J. R. SEELY, M.D.  
H. D. RILEY, JR., M.D.

*This manuscript describes the spectrum of congenital rubella as observed among a group of children studied intensively at the Children's Memorial Hospital, University of Oklahoma Medical Center, since the rubella epidemic of 1964. It demonstrates the wide variety of special resources needed to handle the long-range problems arising out of the multiple needs of the affected children.*

IN THE WINTER and spring of 1964, the largest pandemic of rubella in the history of this country occurred in the states east

From the Department of Pediatrics and the Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The Clinical Research Center is supported by Grant No. FR-62 from the Division of Research Facilities and Resources, National Institutes of Health.

These studies were also supported by Grant No. FR-62 from the National Institutes of Health supporting the Clinical Research Center, Grant No. C-73 from the National Foundation supporting the Clinical Study Center for Birth Defects, and grants to the Pediatric Pharmacology Unit, all located at Children's Memorial Hospital, and by Grant No. 2-T01-HD00064-06 from the National Institute of Child Health and Human Development.

of the Rocky Mountains. The Rocky Mountain and Pacific Coast states were spared. The teratogenic effects of the rubella virus had been demonstrated previously and the aftermath of this pandemic more than amply confirmed this relationship and in addition indicated an ever wider spectrum of sequelae. This report presents data obtained from a multidisciplinary study of the congenital rubella syndrome carried out at the Clinical Research Center at the Children's Memorial Hospital, University of Oklahoma Medical Center primarily on children affected by that epidemic. Data are presented on 31 patients.

An organized approach to the study and treatment of these children was devised. This included a general pediatric evaluation and more specialized evaluation as indicated. The latter were primarily related to the cardiovascular, hematopoietic, and neurologic systems. Comprehensive virologic studies were carried out on all patients, and in several cytogenetic studies were done as well.

In Table I are included data relating race and sex distribution of the children. Of this group 23 were products of the 1964 epidemic, the majority being born from November 1964 through January 1965 approximately eight months after the reported height of the epidemic. There is a predominance of Caucasian females, slightly more than 50 percent of the group. The reasons for the relative rarity of other racial groups are



Table I  
SEX AND RACE DISTRIBUTION OF  
CONGENITAL RUBELLA SYNDROME

Race	Male	Female	Total
Caucasian	11	16	27
Negro	1	1	2
Indian	0	2	2
Total	12	19	31

speculative but may be related to the greater likelihood of previous infections (and thus immunity) in the mothers.

Historically the incidence of known clinical rubella or of known exposure without clinical infection is shown in Table II. A history of clinical maternal infection during the first trimester was obtained in mothers of 16 patients, slightly more than 50 percent. Inapparent infection occurred in 15 of the mothers and of these eight gave a history of known exposure. The remainder of the mothers denied both infection and known exposure.

Table II  
HISTORICAL INCIDENCE OF  
MATERNAL RUBELLA

History	No.
Known clinical disease	
1st month	5
2nd month	6
3rd month	5
Inapparent Infection	
History of exposure	8
No known exposure	7
Total	31

Isolation and identification of rubella virus was done in African Green Monkey cell cultures by the viral interference method using ECHO II virus according to the procedure of Parkman and associates. Of 26 children examined for the presence of rubella virus from 105 clinical specimens, 70 percent were excreting virus from the nasopharynx and or kidneys. It is noteworthy in this series that virus was identified in 28 percent of the lenticular specimens examined but was not cultured in either of the two specimens of ductal tissue removed surgically. Tabular data on these studies are presented in Table III. Serial nasopharyngeal cultures were obtained, and five infants continued to shed virus for extended periods as shown in Table IV. Virus persisted and

Table III  
ISOLATION AND IDENTIFICATION OF RUBELLA  
VIRUS FROM 105 SPECIMENS

Source	No. of Patients Examined	Percent of Infants with Positive Cultures
Nasopharynx	26	61
Spinal Fluid	2	50
Urine	26	27
Lenticular Tissue	7	28
Ductus Arteriosus	2	0
Kidney	1	0
Lip Tissue	1	0

A 1954 graduate of the University of Virginia School of Medicine, W. M. Thompson, Jr., M.D., has been certified by the American Board of Pediatrics with a subspecialty in pediatric cardiology. He is presently Associate Professor of Pediatrics at the University of Oklahoma School of Medicine.

E. D. Thomas, M.D., is Assistant Professor of Pediatrics and Director of the Children's Study Center at the University of Oklahoma Medical Center.

Lawrence A. Chitwood, M.D., received his Ph.D. degree from the University of Oklahoma School of Medicine in 1964, where he is now a special instructor in the Department of Pediatrics. He is a member of the American Society for Microbiology, the Sigma Xi, the Electron Microscopy Society of America, and the New York Academy of Science.

A 1964 graduate of the University of Utah School of Medicine, J. Rodman Seely, M.D., is now Associate Professor of Pediatrics and Biochemistry at the University of Oklahoma School of Medicine. Doctor Seely is President of the Central Oklahoma Pediatric Society and a member of the American Academy of Pediatrics, the Endocrine Society, the American Association for the Advancement of Sciences, and the New York Academy of Sciences.

Harris D. Riley, Jr., M.D., a graduate of Vanderbilt University School of Medicine, has been certified by the American Board of Pediatrics. He is presently Professor and Head of the Department of Pediatrics at the University of Oklahoma Medical Center and Pediatrician-in-Chief at the Children's Memorial Hospital. His medical affiliations include the American Pediatric Society, The Society of Pediatric Research and the Infectious Disease Society.



was recovered from these infants for periods of nine to sixteen months. Interestingly in patients DB and BW initial viral cultures were negative and subsequently became positive. Whether this was a reflection of inefficiency of the method or of quiescent periods of viral shedding is not known.

Antibody studies were not done on these children. Other investigators have reported that antibody, both IgM and IgG fractions, can be detected in these infants at birth, and that the infants do produce antibody while shedding virus. The persistence of antibody is sufficiently constant to support a retrospective diagnosis of intrauterine infection. Before leaving the virologic and immunologic aspects of these patients it is of interest to note the recovery of rubella virus from the nasopharynx of a 22-month-old infant admitted with a diagnosis of glomerulonephritis, approximately two months after clinical rubella. In this child rubella virus persisted for a considerable period of time after clinical infection had cleared.

The number of clinical manifestations reported with the congenital rubella syndrome is large. Gregg originally described cataracts, cardiac malformations, deafness, and mental retardation. Studies associated with the 1964 epidemic have broadened the view and permitted the recognition of many other manifestations. In addition more accurate data concerning incidence have accumulated. In Table V are listed the abnormalities noted in this series. Major abnormalities noted historically and on physical examination included a brownish discoloration of the umbilicus, developmental retardation, low birth weight, cataracts and other ophthalmologic anomalies, cardiovascular disease, and hepatosplenomegaly.

Cardiovascular anomalies were seen in 18 of these children and clinically included several anatomic lesions. The data are shown in Table I. The most common lesion was that

Table IV	
PERSISTENCE OF RUBELLA VIRUS FROM THE NASOPHARYNX OF FIVE INFANTS	
Patient	Period of Recovery In Months
DB	9
MB	13
BW	14
NP	15
ML	16



Figure 1. Selective pulmonary artery angiogram demonstrating bilateral distal pulmonary artery stenosis.

of distal pulmonary artery stenosis seen in 15 of the 18. Of nine patients with persistent patency of the ductus arteriosus seven also had findings indicating pulmonary artery stenosis. The degree of severity of the pulmonary artery narrowing varied, though in this series the older patients in general had more severe stenosis. Two infants, however, had quite marked narrowing. An example of this is shown in the pulmonary angiogram, Figure I. Whether this tendency represents progressive disease is not clear from this study; longer followups hopefully will elucidate the question. Included in these data are two severely involved identical (by history) male twins with different anom-

Table V		
CLINICAL MANIFESTATIONS OF CONGENITAL RUBELLA		
Clinical Finding	No.	%
Brown Pigmentation of Umbilicus	123	75
Development Retardation	21	67
Low Birth Weight	20	65
Cataracts	20	65
Cardiovascular Abnormality	18	58
EEG Abnormality	17	55
Hepatosplenomegaly	16	51
Hearing Defect	16	51
Seizures	3	10
Petechiae Rash	4	13



Table VI  
CARDIOVASCULAR ABNORMALITIES NOTED

Abnormality		
Peripheral Pulmonary Artery Stenosis	15	83
Persistent PDA	9	50
VSD with Pulmonary Stenosis	1	6
Pulmonary Atresia	1	6

alies. The most severely involved infant had pulmonary atresia with an intact ventricular septum, hypoplasia of the right ventricle and persistent patency of the ductus arteriosus. This child died at the age of four and one-half weeks and did not have cataracts. The other twin had a small patent ductus arteriosus with peripheral pulmonary artery stenosis and developed cataracts by age three months.

The multiplicity of systems involved, the evidence of early fetal involvement, and of growth failure both pre and post natally has suggested that the virus affects the fetus by altering the genetic material. There are experimental data to indicate breakage of chromosomes in rubella infected tissue cultures. Chromosome counts have been carried out on 12 of these children. With one exception these have shown normal results. The exception was a female infant born in August of 1965 without a definite history of maternal rubella or of known exposure. There was a multiplicity of congenital anomalies noted in this child, suggesting the post rubella syndrome and the Trisomy 18 syndrome. Specifically included were failure to thrive, micrognathia, simian creases, rocker-bottomed feet, short sternum, narrow pelvis, prominent occiput, low set ears, typical flexion deformity of the third finger overlapped by the index finger, etc. In addition bilateral cataracts were present with clinical findings of persistent patency of the ductus arteriosus. Chromosomal analysis confirmed the Trisomy-18 syndrome and nasopharyngeal cultures were positive for rubella virus. Thus both syndromes were present and whether this is a chance relationship is not known.

Most patients in this group have been observed for a period of two years or more. As previously noted cataracts were not always present at birth but to date 65 percent have been observed to have cataracts. Develop-

Figure II  
CARDIAC CATHETERIZATION DATA ON S. P.  
NAME: S. P. Hosp. No.: 28-37-90  
DATE: 4-12-65

Location	0 <sub>2</sub> Sat. (%)	Pressure (mm. Hg.)	
Superior Vena Cava	62		
		a: 7	
		v: 3	
		80-82	
Right Atrium	64		
		0	ED: 2-3
		75-80	
Main Pulmonary Artery	63	4-6	
		75-78	
Proximal Right Pulmonary Artery	62	5-6	(1)
		13-14	
Distal Right Pulmonary Artery	62	4-6	(1)
Brachial Artery	95	112/57	M: 8

(1.) Pull back tracing Distal RPA to Proximal RPA

mental retardation persists and is present in 64 percent. Abnormalities in the electroencephalogram, characterized by mild to moderate slow waves with random diffuse simple spike discharges, have been noted in approximately half of these children though only three have evidenced clinical seizures. These patients are on anticonvulsant therapy with good control. Hearing deficits are also noted in approximately 50 percent varying from severe hearing loss to a wide frequency spectrum to only minor hearing losses for high tones. Hearing aids have been of benefit and several children have been fitted with these devices at an early age. An observation not prominent in other series, but noted in 75 percent of this series, is that of a brownish discoloration of the skin over the umbilicus. Not noted in the tabular data were four male children with inguinal hernias. No cases of glaucoma have been noted to date.

Uneventful surgical correction of patency of the ductus arteriosus has been accomplished in all of these children with the abnormality, with the exception of the child with pulmonary atresia. In one of the older children with significant distal pulmonary artery stenosis, correction of the stenotic



areas on the right side has been accomplished with an adequate clinical result, though post-operative catheterization and angiography have not been done. The preoperative data are shown in Figure 2.

A long range plan of rehabilitation of these sensory deprived children is being carried out in the Rubella Nursery. This was done initially at the Child Study Center of the Department of Pediatrics. The program is directed toward preventing the debilitating effects of the severe sensory deprivation. The children are seen once a week and

through work with the mothers an attempt is made to teach techniques of meaningful sensory stimulation. Inherent in this program is parental counseling and education. It is of interest to note that success in this program, while difficult to evaluate, is strongly related to the degree of parental involvement. The difference is not gross but easily seen in comparison to those children who, because of distances involved or parental disinterest, are not being followed in the nursery. ☐

800 N.E. 13th St., Oklahoma City, Oklahoma 73104

**Announcing**  
**ANNUAL SPRING SYMPOSIA**  
**IN**  
**GYNECOLOGY AND OBSTETRICS**  
**April 30th, May 1st and 2nd, 1970**  
**ARROWHEAD LODGE — LAKE EUFAULA**

The Department of Gynecology and Obstetrics  
The Office of Postgraduate Education  
University of Oklahoma Medical Center  
The Oklahoma State Department of Health  
Hillcrest and St. John's Hospitals  
Tulsa, Oklahoma

**Guest Faculty**

DAVID G. ANDERSON, M.D.  
Associate Professor of Obstetrics and Gynecology  
University of Michigan Medical School  
Ann Arbor, Michigan

SEYMOUR L. ROMNEY, M.D.  
Professor and Chairman of Gynecology and  
Obstetrics  
Albert Einstein College of Medicine  
Bronx, New York

WILLIAM F. MENGERT, M.D.  
Professor of Obstetrics and Gynecology  
University of Illinois School of Medicine  
Chicago, Illinois

JOSEPH SEITCHIK, M.D.  
Professor and Chairman of Obstetrics and  
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University of Texas Medical School at San Antonio  
San Antonio, Texas

**INFECTIOUS DISEASE IN**  
**OBSTETRICS AND GYNECOLOGY**  
**ASSESSMENT OF FETAL STATUS IN UTERO**  
**TWO AND ONE-HALF DAYS OF LECTURE AND ROUND TABLE DISCUSSION**  
**SMALL GROUP INFORMAL SEMINARS**

The SPRING SYMPOSIA this year will be concerned primarily with infectious complications in obstetric and gynecologic practice. Prevention, diagnosis and optimum medical and surgical treatment will be discussed in detail. One-half day will be devoted to advances in the assessment of fetal status in utero, including cytologic and chemical analysis of amniotic fluid, fetal electrocardiography and fetal scalp vein sampling. The informal setting of Arrowhead Lodge will contribute to close association between faculty and registrants, giving ample opportunity for small group discussion and individual consultation.

For further information write: Office of Postgraduate Education, University of Oklahoma Medical Center, 800 Northeast 13th Street, Oklahoma City, Oklahoma 73104.



# Renal Artery Aneurysm

## Report of a Case With Associated Hypertension

JAMES D. GREEN, M.D.

*A rare condition is described here, accompanied by hypertension. It is postulated the aneurysm may be etiologically related to the hypertension. Consideration of renal artery aneurysm in evaluation of hypertension is suggested.*

RENAL ARTERY aneurysm is an infrequent angiographic finding and associated hypertension is even more unusual. Glass, *et al.*, reported that, of over 300 cases of renal artery aneurysm that have been reported, greater than 50 percent of these have been within the past ten years.<sup>1</sup> It is thought that this lesion constitutes about one percent of all aneurysms. The incidence, based on autopsy studies, has been reported variously as being 0.0009 percent to 0.015 percent of all autopsies.<sup>1, 3, 4, 5, 6</sup> A recent report, however, using a lesser total number of autopsies, lists the incidence as 0.9 percent. In a 1960 paper by Ippolito, *et al.*, the incidence was 0.0001 percent.<sup>8</sup> Perhaps the somewhat changing incidence can be attributed, in part, to the greater diagnostic use of angiography in suspected cases of renal vascular disease.

It is generally conceded that hypertension occurs in about 15 percent of those reported cases.<sup>8, 9</sup> However, in a recent paper by Barry, *et al.*, analyzing a series of 25 cases,

there was associated hypertension in 76 percent of the cases.<sup>10</sup> Another series reports an incidence of 86 percent,<sup>2</sup> and another 75 percent.<sup>1</sup> Klein feels that unilateral renal artery aneurysm may be associated less commonly with hypertension than is chronic pyelonephritis.<sup>21</sup>

The purpose of this paper is to present a case of documented renal artery aneurysm with associated hypertension that was discovered during a hypertension evaluation.

### CASE REPORT

This 37-year-old white male was discovered to be hypertensive in early December, 1965 complaining at that time of bitemporal and bioccipital throbbing headaches that awakened him in the mornings. His blood pressure was 190/130. He was known to have been normotensive three months earlier when elective back surgery was done. On examination he had segmental arterial narrowing with A-V junction changes on fundoscopic examination. Cardiac examination disclosed a forceful apical beat and accentuated pulmonic and aortic second sounds. The CBC, FBS, BUN, IVP, and chest x-ray were normal. A routine urinalysis was completely normal. An ECG showed evidence of left ventricular enlargement. Blood pressure in the legs was not determined.

He was placed on hydrochlorothiazide and when no improvement in his hypertension ensued, guanethidine was added to his therapy. However, because of minimal improve-



ment, hospitalization was advised and finally undertaken on December 29, 1965. The remainder of the history was not remarkable.

On physical examination his blood pressure was 180/120 mm Hg in the right arm and 190/120 mm Hg in his left arm. His pulse, respiration and temperature were normal. He was an alert white male in no acute distress. The fundusoscopic findings were unchanged from those previously recorded. Cardiac findings consisted of a very forceful PMI and accentuated pulmonic and aortic second sounds. With the exception of two scars on his lower back, the remainder of the physical findings were normal.

Laboratory tests revealed a hemoglobin of 17.9 gm., hematocrit 50 percent, and WBC of 11,250 per cubic millimeter with a normal differential. The urinalysis, VMA test, and 5 HIAA tests were normal. The plasma electrolytes were as follows:  $K^+$  of 3.0 meq/l, NA 144 meq/l, Cl 96 meq/l, and  $CO_2$  of 29.2 Mm/l. Serial FBS and BUN determinations were normal. A renogram and renal scan were normal as was a skull x-ray. An intravenous pyelogram, done prior to admission, was normal. A retrograde femoral arteriogram revealed an aneurysm of the right renal artery, just beyond the bifurcation, measuring 13mm by 11mm.

Because of this angiographic finding, its potential hazard, and its possible association with the hypertension, the patient was operated and the saccular aneurysm was resected and reconstructive vascular surgery was done on the right renal artery. Post-operatively he did very well and was noted to be normotensive. He remained normotensive for about one month after discharge, at which time his pressure again became mildly elevated requiring only a thiazide preparation for control. When last seen in

*James D. Green, M.D., a graduate of the University of Oklahoma School of Medicine, limits his practice to his specialty, internal medicine. In addition to his private practice in Tulsa, he is on the teaching staff of St. John's Hospital in Tulsa. He is a member of the American College of Physicians, the American Heart Association and the American Society of Internal Medicine.*



Figure A. Shows preoperative anatomical finding with aneurysm by depicted area.

September of 1966 he was still taking this drug and had a normal pressure.

DISCUSSION

There are four recognized types of renal artery aneurysms. These consist of: 1) saccular; 2) fusiform; 3) post stenotic and 4) associated A-V fistulae. Of these four types the saccular is the most common and this discussion will deal primarily with this type. The primary cause of these aneurysms is

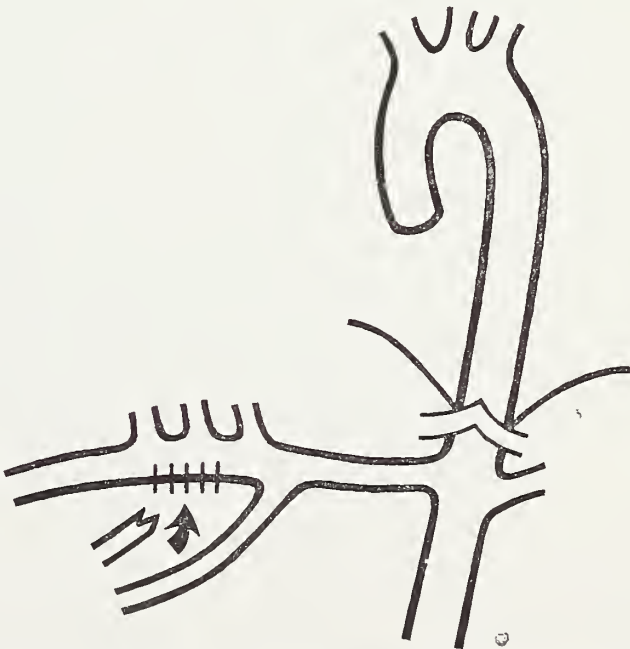


Figure B. Postoperative result with previously noted site of aneurysm in depicted area (operative result).



weakening of the arterial wall secondary to congenital, traumatic, inflammatory, or degenerative processes, with degeneration accounting for most aneurysms.<sup>2</sup> Some of the aneurysms may be calcified and seen on the abdominal flat film (signet ring sign). Barry, *et al.*, report the incidence of calcification to be 36 percent, while others have reported it as 20 percent,<sup>1</sup> 27 percent,<sup>8</sup> and 50 percent.<sup>11</sup> This is prognostically significant because the calcified aneurysms have not been reported to bleed.<sup>9</sup>

The presence of one calcified aneurysm is no real indication of the total number of aneurysms in any one patient. Barry, *et al.*, reported six cases with proved renal artery aneurysms that had a total of seven calcified aneurysms and five non-calcified aneurysms for a total of twelve aneurysms. These lesions occurred in both kidneys.<sup>10</sup> Glass, *et al.*, report 16 of their 20 cases had unilateral aneurysms with the remaining four cases having bilateral lesions. Excluding two patients with multiple intrarenal aneurysms, in the remaining 18 patients were found 24 aneurysms of which 12 were calcified. The obvious lesson to be learned is that one calcified aneurysm may be only a hallmark for several non-calcified lesions.

The aneurysm is located in the main renal artery or a bifurcation of a primary branch in over 50 percent of the reported cases.<sup>1</sup> Glass reported that 18 percent of his cases involved the main stem of the renal artery, two percent of which were calcified, 45 percent were at the bifurcation with 35 percent calcified and the extra parenchymal branches of the renal artery accounted for seven aneurysms, three being calcified. The remainder in his series were intrarenal and non-calcified.<sup>1</sup> Intrarenal aneurysms have been reported as noted above, but are very rare with only 22 cases in the literature.<sup>1, 2, 12, 13, 20</sup>

The non-calcified aneurysms are particularly prone to bleed, especially in the case of



Arrow on picture points to aneurysm as described.

pregnant women where fatal hemorrhage has occurred in seven reported cases.<sup>9</sup> There have been 24 cases of ruptured non-calcified aneurysms in 169 reported cases with a mortality rate of 83 percent.<sup>8</sup> Another author reports the incidence of rupture of non-calcified aneurysms is 25 percent.<sup>1</sup> The actual incidence of symptomatology and physical findings have been reviewed by three authors in the following table.

Renal artery aneurysms appear to occur most frequently in the older age group; however, aneurysms have been reported in all ages, even in a nine month old infant with hypertension.<sup>21</sup> The incidence in sexes is about the same for males or females.

The actual mechanism of hypertension in these cases is assumed to be on a renin angiotension basis. Detailed studies and measurements regarding this have not been reported.

The diagnosis is suspected on the basis of the previously mentioned physical findings and symptoms, plus the finding of a calcified aneurysm or the demonstration of a non-calcified aneurysm. The results of rapid sequence pyelograms are not diagnostic. The principal means of diagnosing the lesion is renal angiography.

In a series of eight hypertensive patients

Author	Total	Pain	Mass	Bruit	Hematuria	Hypertension
Abeshouse <sup>3</sup> (1951)	115	63(55%)	31(28%)	6(5%)	41(33%)	19(16%)
McKiel, <i>et al.</i> <sup>2</sup> (1936)	16	3(19%)	1(6%)	4(25%)	5(31%)	12(85%)
Glass, <i>et al.</i> <sup>1</sup> (1967)	20	5(25%)		3(15%)	3(15%)	15(75%)



whose aneurysms required nephrectomy because of the difficulties encountered in vascular reconstruction, Barry, *et al.*, report that four were found to have no associated intrarenal disease. In addition, of these four patients three remained normotensive 15 months to six years after surgery. The other patient was improved by the surgery. Of the eight patients, 75 percent have remained normotensive for longer than one year, one has been improved and one had a recurrence three months following nephrectomy.<sup>10</sup>

The treatment in most cases is nephrectomy; however, reconstructive vascular surgery has been used more in recent years. The fact that most of the aneurysms occur in the renal artery itself makes these patients good candidates for vascular surgery. The lesion should be considered in all patients suspected of having renovascular hypertension.

#### SUMMARY

This paper presents a case of renal artery aneurysm with associated hypertension occurring in a 37-year-old white male. This particular patient underwent reconstructive renovascular surgery with subsequent improvement of his hypertension. A review of the literature pertinent to the subject is also presented.

Generic and Trade Names of Drugs  
 Hydrochlorothiazide; "HydroDiuril" (Merck Sharp & Dohme).  
 Guanethidine; "Ismelin" (Ciba).

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### ATTENTION COUNTY MEDICAL SOCIETIES

All resolutions from your county medical society to be presented to the OSMA House of Delegates must be in the OSMA office no later than **30** days preceding the annual meeting. The 1970 Annual Meeting will convene May 14th-16th, hence deadline for receipt of your resolutions is **April 14th, 1970.**



# Role of the Veins in Shock

LERNER B. HINSHAW, Ph.D.

*Contrary to opinion, the veins are not simply a passive system of collecting tubes. Recent exciting research findings have revealed that they possess a variety of sophisticated functions in shock.*

**E**XTENSIVE WORK in recent years has shed much light on the function of veins under a variety of conditions. Several important review articles have focused on the many problems concerning mechanisms operating in the venous system.<sup>1, 2, 3</sup> Present knowledge about the control of veins is fragmentary regarding, in particular, local and reflex as well as central nervous control.<sup>1</sup> It is not true that the veins are a passive system of draining tubes; the venous system appears to be as reactive and well controlled as any of the other vascular segments.<sup>1</sup> Veins seem to have at least two major dynamic functions: resistance and capacitance functions, which are influenced by direct passive and active (neurohumoral) and indirect factors.

Veins transmit blood from capillaries to the right atrium in the systemic circulation and any factor, passive or active, influencing passage of blood through this segment will alter cardiac output directly. Cardiac output is equal to venous return under steady state conditions, and any situation which alters the capacitance or resistance functions of veins may be expected to alter cardiac output. Although the magnitude of venous resistance changes is very small when compared to the total contribution of pre-capillary vascular segments, its physiological importance cannot be minimized. For example, if venous pressure increases in a particular vascular bed, a rise in organ weight may take place, even with a large vein pressure elevation of only one mm Hg,<sup>4</sup> and capillary pressure may rise resulting in loss of fluid to the extravascular space or pooling upstream from constricted veins. Thus, a slight increase in venous resistance, under certain conditions, could result in loss of blood from the active circulation, a decrease in venous return and subsequent drop in cardiac output. This, of course, assumes that no other changes intervene in response to the increase in venous pressure which could conceivably precipitate a variety of other actions. Of course, one cannot consider the contribution of the venous resistance component to intravascular pooling or extravascular loss of fluid, without also taking into account changes occurring in the pre-capillary vas-

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cular segment. For example, changes in capillary mean hydrostatic pressure depend on alterations in the ratio between pre-capillary and post-capillary resistance segments. Thus, if the ratio of pre-capillary to post-capillary resistance is increased, mean capillary hydrostatic pressure will fall, leading to a net absorption of extravascular fluid to the circulation, and the opposite will occur when the ratio is decreased.<sup>1</sup> Changes in this ratio constitute one of the main physiologic variables in the filtration exchange. Because of the physical proximity of veins to capillaries, and on account of the relative ease by which pressure can be transmitted upstream through the venous system even though the absolute value of venous resistance is small compared to that of the arterioles, the post-capillary resistance segment may exercise a profound influence on the capillary bed.

A normal physiological function of veins is their ability to store blood, described as their capacitance function. It is designated thusly because it contains some 65 to 80 percent of the entire blood volume.<sup>5, 6</sup> It, therefore, constitutes a voluminous and highly variable blood reservoir or cardiac "fore-chamber." Folkow and Mellander discuss the integrated function of veins and outline various features which must be taken into consideration in its understanding: (1) the functional characteristics of venous smooth muscle; (2) the superimposed nervous and hormonal influences; (3) reflex and central control; and (4) the cooperation and/or competition between neurogenic mechanisms and local factors which influence venous tone.

Mellander and Lewis<sup>7</sup> point out that previous studies on the peripheral circulation in shock have been restricted almost exclusively to descriptions of the changes in resistance to blood flow. They add that a complete analysis must also take into account the concomitant effect of shock on capacitance, the relative size of the capillary bed open to flow, and the rate and direction of capillary filtration.

The purpose of this paper is to allude to our present knowledge describing changes in function or activity of the venous system and to develop an analysis of these observa-

tions leading to a mechanistic understanding of the role of veins in shock.

*Neural influences on the venous system in shock.* During hemorrhagic shock, there is impairment and eventually abolition of the responses of the capacitance vessels in cat skeletal muscle to regional lumbar sympathetic vasoconstrictor nerve fiber stimulation.<sup>7</sup> Also, the pre-capillary resistance response declines faster and is abolished earlier than the post-capillary resistance response. The effect of this is to impair and eventually abolish the ability of constrictor nerve stimulation to decrease mean capillary hydrostatic pressure. Preservation of the post-capillary response beyond that of the pre-capillary, eventually results in a net outward movement of capillary fluid in response to nerve stimulation. In cats, two hours after onset of hemorrhage, the rate of loss of plasma filtrate from the circulation is reported to be 0.035 ml/min/100 gms of tissue.<sup>7</sup> This amount is considerable and in a 70 kg man could conceivably result in a decrease in circulating blood volume of 600 ml/hour. This would be accomplished by filtering only two ml of fluid into the interstitial space of every 100 gms of muscle, a volume not detected as gross edema.<sup>7</sup> Stimulation of the sympathetic outflow to the extremities of dogs produces marked and prolonged elevations in small vein pressure.<sup>8, 9, 10</sup> One of the major problems is that since only alpha receptors are present in veins, sympathetic nerve stimulation results only in constriction.<sup>3</sup> Relative relaxation of the pre-capillary segment might therefore be deleterious from the standpoint of trapping blood in the periphery. In the normal physiological state, contraction of venous smooth muscle is of hemodynamic significance either by its ability to mobilize blood and thus promote venous return to the heart, or by its ability to stiffen the walls of the veins and so enable them to resist a greater hydrostatic pressure.<sup>11</sup> The latter type of contraction also helps maintain venous return by preventing or reducing pooling of blood.

*Humoral influences on the venous system in shock.* This section will be concerned with the vascular effects of endogenously released humoral agents such as histamine and catecholamines and metabolic products, including a variety of unknown substances released



during normal metabolism from the tissue cells. Hemorrhagic hypotension is associated with a marked reduction in skeletal muscle blood flow, which may result in a relative imbalance between the supply of blood and the metabolic demands of the tissue. In this situation, it is assumed that there is a relative accumulation of tissue metabolites,<sup>7</sup> which results in dilatation of vascular smooth muscle. Even the venous segment participates in dilatation although pre-capillary vessels show a greater degree of relaxation. Current research in this laboratory has utilized a modification of the Pappenheimer and Soto-Rivera technique<sup>1</sup> in determining isogravimetric capillary pressure. With this technique average capillary pressure in the foreleg can be determined. Pre-capillary resistance may then be calculated by determining the difference between large limb artery pressure and mid-capillary pressure and dividing this difference by the blood flow ( $R_a = P_a - P_c/F$ ) while post-capillary resistance may be estimated by determining the difference between mid-capillary pressure and orifice vein pressure and dividing this difference by the blood flow ( $R_v = P_c - P_v/F$ ). Experiments carried out in this laboratory utilizing the technique have clearly shown that the pre-capillary segment (large artery to capillary) is very sensitive to the dilating effects of histamine infusion.<sup>12</sup> The post-capillary segment (capillary to orifice vein) does not respond to histamine infusion by resistance changes, except with very high doses in which the results are variable.

Research on gram-negative endotoxin shock in dogs has demonstrated profound hepatic venous constriction.<sup>13, 14</sup> Intravenous injection of endotoxin from *Escherichia coli* in dogs is characterized by an immediate and precipitous decline in blood pressure with a simultaneous elevation of portal vein pressure. This reaction is abolished by hepatectomy, or exclusion of the liver from the circulation, and was found to be due primarily to trapping of blood within the liver. Following intravenous injection of *E. coli* endotoxin, marked increases in portal venous pressure occur and as a result venous return to the right heart is drastically reduced re-

sulting in systemic hypotension. The rise in portal vein pressure occurs passively as a result of intrahepatic venous constriction. A catheter advanced retrograde into the hepatic vein with a tip placed within the liver substance was found to exhibit a pressure rise as a result of endotoxin injection. This earlier work suggested that localized venous spasm in the hepatic venous system produced pooling of large quantities of blood. The total venous return was thereby critically reduced and a fall in cardiac output and arterial blood pressure were inevitable and would result in severe systemic hypotension and shock. To clarify the role of the liver in forms of shock, a series of studies has been carried out in this laboratory with the isolated perfused dog liver.<sup>15</sup> Evidence from this study pointed to the intrahepatic venous system as the primary site of endotoxin action with a subsequent myogenic response in the hepatic arterial segment. Results from studies on the isolated liver further show that the initial vascular responses of the liver to endotoxin do not depend on the release of agents from extra-hepatic sites, since the response of the isolated perfused liver occurs in advance of recirculation time and responses of the liver perfused by a heart-lung preparation or by a dog are indistinguishable. Data suggest that the liver is the primary site for the initial action of endotoxin. Venous responses to endotoxin of the isolated denervated organ were similar to those seen in the intact innervated organ. Endotoxin injection into either hepatic artery or portal vein systems resulted in a rapidly developing venoconstriction, presumably in the post-sinusoidal region deep within the venous vasculature. Hepatic vein pressures recorded from catheters placed retrograde into deep veins show significant rises after endotoxin. Several suggested mechanisms of action regarding the liver venous response to endotoxin emerge from this study. Endotoxin may exert a direct action on the hepatic veins. This possibility was supported by the observations that no vasoactive drug or combination of drugs injected into the inflow hepatic vessels satisfactorily duplicated the vascular response of the liver to endotoxin. It may be, however, that vasoactive agents which are as yet unidentified are instrumental in producing the liver vascular response to endo-



toxin. Of great interest in the present study was the observation that the vascular response of the liver was the same whether drugs were injected into hepatic artery or portal vein inflow vessels. This finding suggested (1) that extensive and anastomotic channels exist between arteries and veins, or (2) that arteriolar segments are bathed in venous blood. Endotoxin may act by releasing endogenous vasoactive agents within the liver resulting in vasoconstriction of intra-hepatic venules. If vasoconstrictor substances are released, their concentrations in venous blood must be very low since the leg bioassay device ordinarily responded with only a slight dilator response; however, it is possible that vasoactive agents may be released in close proximity to the vascular smooth muscle acting specifically in this region, not being released into the general circulation in significant concentration.<sup>15</sup>

Not only are the veins of the hepatic bed directly involved in the shock reaction in the dog, but intestinal veins and venules also participate in the response to endotoxin as has been shown by Meyer and Visscher.<sup>16</sup> These investigators determined the hemodynamic responses of intestinal vascular segments of the dog to intravenous injection of a lethal dose of *E. coli* endotoxin. Pressures were measured in large and small vessels of the intestine and mesentery (small veins 30-60  $\mu$  in radius). Mesenteric small vein pressures were obtained by using plastic cannulas with outside diameters of 0.5 to 0.6 mm for the small vessels. In another group of animals, pressures were measured in the intestinal small veins (66-120  $\mu$  in diameter) utilizing a microcannulation technique. Cannulas were kept patent by periodic flushing with heparinized saline. Pressures were measured by Statham pressure transducers and recorded with a meaning circuit on a Sanborn recorder. The submucosal vessels of the small intestine were exposed by microdissection in seven animals. Microscopic observations were made with a Leitz Ultropak and photographed with a 35-mm Leica camera. Loops of small intestine were placed on a cork platform, covered with a polyvinyl sheet, and irrigated with Ringer's solution. Vascular diameters were determined five times at a given site to allow statistical treatment of the error of mea-

surement of vessels in a particular photomicrograph. Venous blood pressures were also measured in this experimental group. Meyer and Visscher discussed the possible effects of the various surgical procedures on the nerve supply to blood vessels in the above technique. They assumed that most vasomotor nerves followed major arterial and venous trunks. They, therefore, supposed that the use of a branch of a mesenteric artery supplying a portion of the intestine not under study would presumably not involve interference with a nerve supply to structures under observation. In the case of small vein cannulation by plastic catheters ligated in place, there was, the authors stated, a disturbance of a nerve supply to a small part of the vascular bed, but the objective in these cases was to measure pressures in the collateral vessels in which the nerve supply was intact. They further stated that it probably was the case that all of the pressures measured in this way were somewhat lower than they would have been in vessels of the same size with free-flowing blood, but no other method was available for long-term observation, and they readily accepted this defect. It was believed that any defects due to this experimental procedure would be systematic in the sense that the direction and proportionate magnitude of the error would probably be the same at all times. Microscopic findings showed, on the average, that the small veins and venules were increased significantly in diameter only at two minutes during the initial phase of elevated portal vein pressure following endotoxin injection. The veins, however, became significantly smaller at 50 and 60 minutes. Photomicrographs showed areas of localized venous constriction during the initial phase, but these areas became much more numerous during

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the later stages of shock. After endotoxin, from the data on fractional pressure drop, it was evident that the resistance rises in the small vein to portal vein segment. This was followed by declines in resistance in this segment, yet during the secondary shock period there was a further rise in resistance in the small vein to portal vein segment. Meyer and Visscher also calculated venous wall tension (T) according to the Laplace equation,  $T = Pr$ , where P is a transmural pressure and r the radius of the vessel. The wall tension in the small veins can be approximated by combining the measurements of venous pressures in the intestinal small vein and the changes in radius of veins with similar initial dimensions. These authors presented an average normalized tension-radius diagram at various times after endotoxin. They showed that venous wall tension rose during the portal hypertensive phase and remained above control levels throughout the period of observation. The initial wall tensions in the small veins, or venules, were computed to be 74 dynes/cm before endotoxin was injected. At 50 minutes during the shock period, the values calculated were 92 dynes/cm for the small veins. It has been pointed out that the mechanism for the trapping of blood in the liver and the intestine during the early stages after endotoxin involved the contraction of the hepatic vein or venule sphincters. The mechanism of later intestinal pooling of blood was not known. The results of Meyer and Visscher<sup>16</sup> suggest that the mechanism for the pooling of blood and tissue fluid during the later stages of endotoxin shock involves the development of active tension in the intestinal small veins.

Further work has been carried out by Hinshaw and Nelson<sup>17</sup> on the venous response of the intestine to endotoxin. These authors studied the response of the canine intestine to endotoxin by utilizing an isolated perfused segment of small bowel established in series with an adult dog intravenously anesthetized with sodium pentobarbital. A loop of small intestine from a donor dog was dissected free, together with its connection to the superior mesenteric artery and aorta, and perfused at constant flow in a retro-

grade fashion via the abdominal aorta. Plastic cannulas were secured in each end of the loop to allow for drainage, and mesenteric small-vein pressures (outside diameter > 0.7 mm) were obtained via retrograde cannulation. Small plastic catheters were advanced in a retrograde direction from the larger mesenteric veins toward the smaller veins. The catheter tip was not wedged, as evidenced by a rapid drop in pressure when saline was injected through the catheter and a ready withdrawal of blood from the catheter. The large orifice vein of the isolated intestine was severed and drained at atmospheric pressure. Changes in intestinal weight were continuously monitored by means of a strain gauge weighing device. Lethal doses of *E. coli* endotoxin were administered via the perfusion dog in all experiments. This study elucidated the action of endotoxin on the intestine and illustrated the causal mechanism between circulating vasoactive agents and the increase in intestinal weight. Results from this study by Hinshaw and Nelson showed that increases in venous segment resistance and intestinal weight were found during the post-endotoxin period. Since pressure of the orifice mesenteric vein was maintained at 0 mm Hg, increases in small vein pressure indicated a rise in venous segment resistance in the experiments carried out by Hinshaw and Nelson. Pooling in the intestines after endotoxin need not, therefore, be explained on the basis of back-pressure effects from the hepatic venous circulation, or cytotoxic changes in the capillary membrane, but may be accounted for by the presence of sustained small-vein constriction in the splanchnic bed. These findings demonstrated the prominent part performed by peripheral small veins in endotoxin shock. These investigators also assayed the relative responsiveness of small veins to injected epinephrine before and after endotoxin. Venous responsiveness in their experiments was expressed in terms of total area above base-line values measured after intra-arterial injections of epinephrine into the intestinal inflow circuit. Their results showed that small intestinal veins, though not always showing a greater aptitude in response to epinephrine after endotoxin, invariably remained constricted for a longer period. After injection of epine-



phrine, the time required for small veins to return to their pre-injected pressure values was greatly increased by endotoxin. In summary, evidence indicates that the progressive development of splanchnic pooling is primarily due to active constriction of small veins in which their responsiveness to epinephrine is enhanced by endotoxin.

It should be pointed out that the previous findings were reported from the dog given endotoxin. Numerous species differences have been discovered in subsequent research. The first clear-cut description of species differences in shock was reported by Kuida and others.<sup>18</sup> In this regard, species differences in the hepatic venous response to endotoxin should be evaluated. The subsequent study by Kuida's group conclusively demonstrated a difference in the early hemodynamic effects of endotoxin in the cat, rabbit, and monkey as compared with those which occur in the dog. The minimal and inconsistent changes in weight of short segments of gut in the monkey, rabbit, and cat, combined with the slight to moderate increment in portal venous pressure and the markedly lesser degree of pooling in the cat venous return experiments, were decidedly different from the response that occurs in the dog. The relatively gradual development of hypotension that usually occurs in the monkey and rabbit thus do not appear to be explainable on the basis of hepatic venous constriction.

The effects of endotoxin on the pulmonary hemodynamics of dogs and cats have been studied in intact animals, open chest animals with and without control of cardiac output by an extracorporeal venous reservoir pump system, and in isolated perfused continuously weighed lungs.<sup>19</sup> A major purpose in these experiments was to determine the role of pulmonary veins in endotoxin shock. Pressure in a small pulmonary vein was measured by passing a fine polyethylene catheter (1.2 mm outside diameter) out into a peripheral vein via the left atrium. If this catheter was advanced until it became wedged, a pressure identical to that in the pulmonary artery was recorded. If, then, it was withdrawn from the wedged position by a minute increment, a range of pressures was obtained between pulmonary arterial and left atrial pressure. An arbitrary in-

termediate level was chosen in their experiments in order to observe changes in downstream resistance at constant flow associated with venous constriction or dilatation. Resistance in the post-capillary segment of the lung, that is, venous segment resistance, was calculated by subtracting left atrial pressure from pulmonary artery wedge pressure and dividing this difference by the blood flow through the lungs. Pulmonary artery wedge pressure was chosen in these experiments because it afforded the best available approximation of pulmonary capillary pressure. Results from their experiments showed that the pulmonary vascular response to endotoxin in the dog is characterized predominantly by constriction of pulmonary venules and/or small veins. Numerous measurements of pressures in small pulmonary veins (< 2 mm bore) invariably showed a rise after administration of endotoxin, indicating an increase in resistance to flow in the veins of intermediate bore. Increases in pulmonary artery wedge pressure were also obtained, and these observations are considered to be of importance in showing that the artery wedge pressure changes were due to venous segment resistance alterations and not to artifacts. The additional observation that the pressure in the larger pulmonary veins did not change while large alterations occurred in the smaller veins indicated that the constriction was more or less localized in the region of the venules and small veins. Although the responses in the several experiments were variable in magnitude, the results showed that, on the average, calculated pulmonary venous resistance accounted for a greater portion of the increase in total resistance than did arterial resistance.

The effects of histamine, 5-hydroxytryptamine, and epinephrine on pulmonary hemodynamics with particular reference to venous segment resistances were studied by Gilbert's group.<sup>20</sup> Their experimental model was the isolated perfused dog lung. The lung was perfused at constant flow while pressures were measured in the left atrium and in either the pulmonary artery wedge position or a small pulmonary vein. Venous segment resistance changes were inferred from the drop in pressure from the pulmonary artery wedge to the pulmonary vein. Changes in lung weight were recorded continuously.



It was found that histamine caused an increase in venous resistance. With the rise in venous resistance, an increase in lung weight was observed, presumably as a result of increased capillary blood content. The correlation coefficient between the change in lung weight and the change in venous resistance was  $+0.791$ . Small pulmonary vein pressures rose after administration of epinephrine, norepinephrine, histamine and 5 HT. Their results serve to implicate these humoral agents in the venous response to endotoxin.

Recent unpublished experiments carried out in this laboratory have focused on the role of the pulmonary veins in endotoxin shock in the monkey. Studies were carried out utilizing the venous return preparation in which cardiac inflow is held constant. The venous catheter was advanced through the left atrium and inserted into a deep pulmonary vein. The tip of the catheter was not placed in the wedged position as evidenced by flushing and withdrawal characteristics. The shocking dose of endotoxin was injected into the right atrium. Within one to two minutes pulmonary vein pressure became elevated and, since pulmonary blood flow and left atrial pressure were constant, this indicated a rise in pulmonary venous resistance.

The role of the veins in the hepatosplanchnic bed and in the pulmonary circulation in shock has been discussed. Our attention will now be directed to the response of veins in peripheral vessels; namely, the skin and muscle regions. Haddy<sup>21</sup> has determined the effect of histamine on small and large vessel pressures in the dog foreleg. His experimental preparation has served as a model for subsequent experiments carried out on the canine foreleg by other investigators. He found that low rates of infusion of histamine into the brachial artery of the forelimb raises small venous pressure by arteriolar dilatation; whereas, high rates of infusion raised venous pressure both by arteriolar dilatation and venous constriction. He pointed out that venous constriction probably results both from a direct action of histamine and indirectly through an adrenal discharge as a result of systemic hypoten-

sion. His work clearly distinguishes between the direct actions of injected vasoactive agents on a regional bed and on indirect actions resulting from the effects of the agents on the organism as a whole, in this instance, by causing an adrenal discharge. That the venous constriction partly results from adrenal discharge is indicated by the fact that constriction begins following the fall of systemic arterial pressure and is partially abolished by adrenergic blockade. Furthermore, it is known that epinephrine and norepinephrine are venous constrictors even in low concentrations. The relative contributions of arteriolar dilatation and venous constriction to rise of small venous pressure in the forelimb likely vary depending upon the distribution of various concentrations of histamine. Venous pressure rises because of arteriolar dilatation when increase of concentration is local and slight. When the concentration of histamine is greatly elevated locally, but also slightly elevated generally, venous constriction of the forelimb probably becomes relatively more important than arteriolar dilatation. Arteriolar dilatation becomes less and less effective in raising small venous pressure by virtue of the fall in systemic arterial pressure as a result of histamine administration and partial disappearance of arteriolar dilatation. In addition, the direct constrictor effect of histamine on veins is aided by the constrictor action of an adrenal discharge.

Haddy's analysis<sup>21</sup> of the mechanism of the foreleg venous response to injected vasoactive agents has a direct application to shock. Although vasoactive agents may be released in the earlier phase of the shock period prior to the drop in arterial pressure, and may have direct influences on the venous segment of regional beds, ultimately systemic arterial pressure falls and hypotension is observed. Following the onset of hypotension in shock, the involvement of the sympathoadrenal system would be expected, and further constrictor effect of the venous system would be obtained.

Forelimb venous changes associated with the development of irreversible endotoxin shock have been reported.<sup>22</sup> In these experiments a series of isolated leg perfusions were carried out to obtain more definitive information as to the nature of the peripher-



al vascular response of the post-capillary segments to endotoxin. Adult mongrel dogs, anesthetized with sodium pentobarbital, were used in these experiments. The leg from a dog was completely severed and placed on a strain gauge weighing device. It was perfused at constant flow by means of a Sigma-motor pump obtaining blood from an intact heparinized animal. The findings of this study indicated the important effects of circulating substance on the venous resistance in the isolated perfused leg. The presence of an intact animal in the perfusion circuit was found to be essential in order to obtain and sustain response in the venous system following injection of endotoxin, and indicated a crucial role of humoral substances released in the intact animal, resulting in alterations of vascular resistance in the foreleg. As the dog became severely hypotensive, vasoactive substances were released into the blood, carried to the limb, and resulted in vascular changes. These observations with endotoxin shock therefore bear a similarity to those observed previously by Haddy with histamine injection. An isolated leg perfused by a heart-lung preparation responds with only minimal small vein constriction after endotoxin. However, with the introduction of the animal into the perfusion circuit, a large sustained venous constriction in the foreleg is observed. The constriction of the foreleg veins takes place primarily only after the drop in systemic arterial pressure. This investigation<sup>22</sup> also suggested that the development of the irreversible period of endotoxin shock might be due in part to altered responses of the post-capillary venous segment to pressor, epinephrine-like substances. Subsequent experiments carried out in this laboratory have also shown a similar venous response during hemorrhage in dogs. Hinshaw and others<sup>23</sup> have studied the response of the monkey foreleg in endotoxin shock. The surprising and unexpected finding was that decreases in the monkey forearm weight and small vein pressure were observed, thereby indicating the complete absence of venous constriction. These monkey studies indicated that humorally induced vasoconstriction after endotoxin may be insignificant when compared with the dog and again point to the complicating effects in interpretation and understanding of mechanisms due to

species differences.

It is possible, however, that in the late phase of shock, monkey forearm responses may ultimately show vasoconstriction; however, this possibility must await further investigation. As an extension of the previous studies on the isolated limb, further experiments have been carried out utilizing an isolated saphenous canine vein. The vein preparation was surgically removed from the hindlimbs of adult mongrel dogs anesthetized with sodium pentobarbital, and the vein was immediately transferred to an oxygenated saline bath maintained at 37° C. A Statham pressure transducer was utilized to record changes in vessel tension. A period of 15 to 30 minutes was required for relaxation of the contractile elements of the vein to occur, such that a constant base line could be recorded. Epinephrine (0.1 µg) was added to the bath to obtain a standard response curve of the isolated strip. Experiments were carried out by adding 100 µg of *E. coli* endotoxin to the bath containing 50 ml of perfusate. A reproducible response of the isolated saphenous vein was observed when endotoxin was added to heparinized whole blood. Approximately six gms of tension was developed by the contracting vessel which was sustained for six to nine minutes. A latent period of 30 to 60 seconds was characteristically observed between the addition of the endotoxin and the contraction of the vein. The response of the isolated vein to histamine (25 µg) in whole blood was compared with its response to endotoxin. The tension curves were remarkably similar with the important distinction that the lag period observed between addition of endotoxin and contraction of the vein was not seen with histamine. These interesting experiments carried out by Vick<sup>24</sup> further showed that endotoxin had no direct action on the vein strip, but implicated a liberated vasoactive agent following the administration of endotoxin.

*Reflex influences involving the veins in shock.* As has been pointed out in an earlier section, the administration of endotoxin to the canine species results in a prominent hepatic vein constriction, followed by immediate engorgement of the liver. At the same time, there is a marked increase in hepatic arterial resistance. It was thought to be of



interest to investigate the possibility that there may be a connection between the rise in hepatic vein pressure and the increase in hepatic arterial resistance.

To evaluate this possibility, experiments were carried out on the isolated perfused dog liver.<sup>25</sup> The liver was continuously weighed and perfused at constant flow with arterial blood through the hepatic artery and venous blood through the portal vein. Hepatic vein pressure was increased in steps by means of partial outflow obstruction with a screw clamp adjustment. Hepatic artery pressure was seen to increase in a profound fashion as a function of elevated hepatic vein pressure. An increase in hepatic arterial segment resistance occurred, presumably on the basis of a myogenic response. The vascular segment between the hepatic and portal veins exhibited only passive changes as a result of increased venous transmural pressure. The peculiar arterial response would serve to decrease flow through the hepatic arterial system in the face of liver pooling and certain stress states previously observed in the canine species. As an illustration of the great potency of such a reflex, on the average the initial portal vein pressure was about seven mm Hg. At the highest elevation, the pressure was approximately 25 mm Hg. This resulted in the hepatic arterial pressure increasing from an average of about 100 mm Hg to an average of approximately 170 mm Hg. During this period, the hepatic vein pressure increased on the average from -2 mm Hg to 24 mm Hg. These results, therefore showed that the rise in portal vein pressure was simply a passive function of the increase in hepatic vein pressure, a total increase in pressure in the former being about 18 mm Hg. In marked contrast the increase in hepatic arterial pressure was approximately 70 mm Hg. These data strongly suggest that an increase in transmural pressure in the terminal hepatic arteriolar segment stimulates smooth muscle of this segment to contract in a typical myogenic (Bayliss) fashion. The influence of localized compression forces on the arterial segment as a result of accumulation of blood and extravascular fluid following hepatic vein pressure elevation cannot be completely excluded as

a possible explanation. However, some experiments showed that liver weight had returned essentially to the control value following release of hepatic vein partial obstruction, and yet hepatic artery pressure remained above its control value for several minutes.

It is possible that endotoxin may elicit an active vasomotor response in certain liver vessels, particularly hepatic arterioles. Injection of endotoxin in either the hepatic artery or the portal vein, with constant flow perfusion of both systems, results in a significantly greater increase in hepatic artery pressure than in portal vein pressure. This peculiar response, duplicated by raising hepatic vein pressure by a partial outflow obstruction as previously described, suggests that endotoxin injection causes hepatic vein constriction, which in turn produces hepatic arteriolar constriction via a myogenic mechanism. The arterial constriction should reduce liver volume if narrowing of high resistance vessels was generalized, but this effect would be offset by excessive post-sinusoidal venous constriction.

#### SUMMARY

Research in recent years has provided new information on the function of veins under a variety of conditions. The primary purpose of this paper is to allude to studies describing changes in function or activity of the venous system in shock and to develop an analysis of these observations leading to a mechanistic understanding of the role of the vein in this form of stress. This review emphasizes the two major dynamic functions of veins; that is, resistance and capacitance functions, which are influenced by both passive and active factors. Because of the relative physical proximity of veins to capillaries, even small changes in venous segment resistance may have profound effects on the circulation. In addition, the great capacity of veins to store blood under normal conditions provides a potential mechanism for a large shift in volume from the active to sequestered compartments of the blood volume. Analysis of published results shows that there is a dynamic interaction between venous resistance and the capacitance functions. For example, preservation of the post-



capillary (venous) response beyond that of the pre-capillary (arterial) response in shock eventually results in a net outward movement of capillary fluid from the vascular bed as well as an intravascular sequestration of blood upstream from constricted veins. However, the relationships between resistance and capacitance functions are often complex and depend on the degree of stress. An example of this is seen when the liver is stimulated by small amounts of epinephrine to release its sequestered blood into the active circulation. In this instance, the diameter of the veins is decreased. However, if the dose of epinephrine is increased to higher levels, concentrations reported in severe shock, the exact opposite effect may occur and blood may be pooled in the liver vasculature by potent venous constriction.

A variety of experimental techniques has been developed to qualify the resistance and capacitance functions of the veins in shock. These procedures are outlined and discussed in this paper. The interpretation of the results from these experimental procedures, of course, has been difficult. For example, it is not always possible to distinguish between pooling within the venous system and pooling within the capillary bed, as well as loss of fluid to the extravascular compartment. However, in the case of shock, histopathological findings may be incorporated to gain an understanding of the role of veins in their capacitance functions. Thus, in the case of endotoxin shock, the venous return preparation indicates a high degree of pooling immediately after endotoxin injection. Histological examinations also have shown the veins to be greatly engorged with blood during this period. Another helpful technique to assay the capacitance role of veins is the sensitive weighing device which has shown a clearer relationship between venous constriction and increases in weight. For example, in the isolated perfused weighed canine intestine, small increases in weight were produced by small increases in venous pressure, while large increases in weight were observed following large increases in venous pressure. Such procedures provide a helpful means of determining both resistance and capacitance roles of veins and their interactions.

Possible applications of the modified Pap-

penheimer-Soto-Rivera isogravimetric technique appear to be very promising in studies of the role of veins in shock. With this procedure, calculations of post-capillary resistance may be carried out by utilizing the technique to provide an estimate of capillary pressure as well as existing vein pressure. Other techniques are discussed in which small catheters have been placed in various regions of the venous system, and changes in pressures have been measured in shock. If, at the same time, flow through these regions is known, venous segment resistances may be calculated. Also, if organ systems may be weighed at the same time, relationships between venous resistance changes and capacitance functions may be assayed. Pressures in major veins also may be estimated by cannulation of side branches with the advance of small catheters to the wall of the large vessel. These procedures may have particular benefit in that the actual circulation through the large venous segment is relatively undisturbed. There is always the potential problem of partial flow obstruction by the presence of a catheter in a stream of blood. Care must be taken not to wedge catheters into small blood vessels or to partially obstruct the flow of blood by utilizing large catheters placed in relatively small veins.

In spite of all the potential difficulties in experimental techniques in evaluating the capacitance and resistance functions of veins, results from various laboratories have shown a high degree of consistency, and their findings have led to a greater understanding of the roles of veins in shock. Of course, the veins are not performing in an isolated fashion. Influences are projecting beyond themselves to other parts of the circulation; for example, as has been pointed out in the venous arteriolar reflex. Changes occurring both upstream and downstream from the venous segment may have profound effects on the veins.

It is clearly evident that the neural, humoral, and reflex activities in the veins are very complex and widespread, and a better understanding of their interrelationships within the venous system and between the veins and other portions of the vascular tree must await further investigation.



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WHO WORKS?

"The population of the country is 160 million but there are 62 million over 60 years of age, leaving 98 million to do the work.

"People under 21 total 54 million, which leaves 44 million to work. There are 31 million in the federal services which leaves 13 million workers. Deduct 12,800,000 for state and city employees and that leaves 200,000 to work.

"There are 126,000 in hospitals, mental hospitals, etc., which leaves 74,000 to work, but 62,000 of these are bums and others who won't work, so that leaves but 12,000. Now it may interest you to know that there are 11,998 people in jail so that leaves only two people to work. That's you and me, brother, and I'm getting tired of doing everything myself."



## Tumor Clinic Proceedings

Edited by  
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### CASE No. 26: Hodgkin's Disease

**PRESENTATION:** The patient is a 56-year-old white female who one month ago noticed the onset of swelling in the left supraclavicular region. She had been feeling well without fever, night sweats, weight loss, itching or any other history of systemic symptoms. She ignored the swelling initially, but two weeks ago started worrying about

it and went to her physician. He did a biopsy of the supraclavicular nodes and the pathology report was lymphoblastic lymphoma. There were said to be lymphocytes filling the sinusoids, many mitoses and moderate numbers of very bizarre cells with large hyperchromatic nuclei, and hyperplasia of the reticuloendothelial cells. The capsule of the node was infiltrated with similar appearing neoplastic cells which extended into the surrounding fat. She was then referred to the University Medical Center for therapy. Physical examination at this time reveals multiple lymph nodes of one to two cm diameter, palpated in the left supraclavicular region. The liver and spleen are not palpated. There are no other lymph nodes palpated. There is atrophy of the left leg due to previous polio, although she can walk on it using a brace. The rest of the physical findings are within normal limits.

A rather extensive investigation has been carried out in an attempt to determine the stage of her disease. The chest x-ray is normal. The liver scan and liver function studies are normal. The serum protein electrophoresis is normal. The bone marrow and blood count are normal. The sedimentation rate is normal, the VDRL is non-reactive, the fibrinogen is normal and the C-reactive protein negative. The blood chemistry-16 profile is within normal limits. A lymphan-

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.



giogram via the right leg was performed and the results are equivocal. Left leg lymphangiograms were not attempted because of the atrophy. We feel that this is either a Stage I or a Stage III, but because of the incomplete lymphangiogram we cannot be sure of the extent of the disease.

DOCTOR CONDIT: Any questions about the history? Doctor Joel, you saw the submitted slides from the case. What is your impression?

DOCTOR JOEL: I saw same giant cells, plasma cells, and Reed-Sternberg cells. I feel that this represents Hodgkin's Disease.

DOCTOR CONDIT: The most important question in a case such as this is the matter of staging, because it makes a big difference in how the patient is treated and what the outcome will be. I think everybody knows that in Stage I, when the disease is limited to one group of nodes, or in Stage II with disease limited to two adjacent node-bearing areas, the results with radiation therapy are very good with control or possible cure in many patients, but as soon as it becomes more disseminated treatment is less satisfactory. Recently, we, as well as several other institutions, have begun to combine rather radical chemotherapy with radical radiation therapy in an attempt to control the more advanced disease. This represents anywhere from six to ten months of total planned therapy. Doctor Bogardus, how would you classify this case at the moment?

DOCTOR BOGARDUS: It is probably Stage III on the basis of the lymphangiogram. The thing that worries me is that the chest film is apparently negative, and, if it really is negative and the lymphangiogram is finally read as normal, then it is changed to a Stage I or II.

PRESENTER: Is there enough question in your mind to carry out an exploratory laparotomy?

DOCTOR BOGARDUS: This is the question which arises when you have a lymphangiogram that is inconclusive and it is going to make a fair amount of difference in how the patient is treated. Several investigators recently have been advocating laparotomy with biopsy of the abdominal lymph nodes in order to determine the staging accurately.

DOCTOR CONDIT: Doctor Williams, how do you react to this suggestion?

DOCTOR WILLIAMS: I would be opposed to a laparotomy in this very large patient because of the morbidity and even mortality associated with the operation. I might biopsy the suspicious lymph nodes from an extraperitoneal approach avoiding much of the risk of a laparotomy.

DOCTOR CONDIT: Some groups are going so far as to carry out a full exploration of all the nodes below the diaphragm and also carry out a splenectomy and laparotomy.

DOCTOR WILLIAMS: I think the spleen is a little enlarged from the scan.

DOCTOR BOTTOMLEY: It really is a difficult decision to decide whether to put a patient through something like an exploratory laparotomy for this particular disease. At a recent conference on lymphoma and leukemia, Doctor Vera Peters, a radiation therapist, described two cases which had positive lymphangiograms and splenomegaly, which on biopsy were negative. These patients were thus found to have less extensive disease than was thought on the basis of the lymphangiogram, and this allowed more conservative radiation therapy than would have been used on the basis of the positive lymphangiogram alone.

DOCTOR CONDIT: The practical point is that if this patient has nodes only in her neck there is an 80 to 85 percent chance that her disease will be controlled by radiation therapy. But if it is in the abdomen also, then the chance of control drops much lower.

DOCTOR BOGARDUS: To approximately 30 percent. If she had enlarged lymph nodes in the mediastinum one would be more inclined to accept the lymphangiogram.

DOCTOR CONDIT: But we have a lymphangiogram on only one side.

DOCTOR BOGARDUS: That's right, only on one side, and even that is not very good technically. There are many periaortic nodes that do not fill for one reason or another and this factor combined with a normal mediastinum would make me a little hesitant, especially with no more nodes than she has involved in the neck, to call this lymphangiogram positive. If anybody needs a laparotomy or a retroperitoneal approach to determine staging, I think this patient is an ideal candidate for this.



DOCTOR CONDIT: Would you be receptive to such a request, Doctor Williams?

DOCTOR WILLIAMS: Yes.

DOCTOR BOGARDUS: It would be extremely helpful if, when they go after these nodes, they scatter a few clips about when they take the nodes out, so that we can compare those nodes removed to what we saw missing on the lymphangiogram.

DOCTOR BOTTOMLEY: This brings up the question about how aggressive we should be in patients with this disease. Although in the past it was assumed that the disease was disseminated at the time of diagnosis, more recent investigations and the results of radical therapy of patients with Stage I and II disease would suggest that this is not true. Because of the difficulty of staging, some radiation therapists have advocated so-called total nodal radiation therapy even for Stage I or II disease in an attempt to eradicate disease in nodes that might be involved though clinically benign. In Stage III or IV disease the problem with total nodal radiation therapy is that it takes so long to complete it that the disease outside the initial treatment area may progress rapidly and involve areas which cannot be cured by radiation therapy, such as the liver. Because of these problems we are currently treating Stage III and IV patients with intensive chemotherapy in an attempt to reduce the amount of disease. The agents are Cytosan, Oncovin (Vincristine), Prednisone, and Procarbazine (Matulane). If the patient has substantial regression of his disease using this combination chemotherapy, he is then considered for total nodal irradiation. It is too early to tell what the results of this approach will be in patients with Stage III and IV disease, but it is encouraging that

three patients treated with intensive chemotherapy have had marked regression of their disease.

DOCTOR BOGARDUS: There are many people who now feel that Hodgkin's Disease does not start as a disseminated disease. For this reason, I think any extreme you go to to make an accurate diagnosis, especially when this makes a big difference in therapy, is justified.

DOCTOR CONDIT: It appears very important to determine the extent of this patient's disease. It is probable that exploratory laparotomy will be required.

*FINAL DIAGNOSIS:* Hodgkin's Disease, Stage I or Stage III.

*TUMOR CLINIC RECOMMENDATIONS:* If the patient has Stage I or Stage II disease, intensive radiation therapy is the treatment of choice. If the patient has Stage III or Stage IV disease, the patient should be treated with chemotherapy, followed by radiation therapy, if there is good regression of the lesions. It may be necessary to carry out an exploratory laparotomy with biopsy of periaortic, iliac and mesenteric lymph nodes, a liver biopsy and a splenectomy to stage her disease accurately.

*FOLLOW-UP:* At laparotomy the patient had no clinical involvement of the right iliac nodes, which had appeared positive on lymphangiogram. A biopsy of these nodes was also negative. The biopsy of a node in the mesentery was, however, positive for involvement with Hodgkin's Disease. The spleen and liver were not involved. Because of these findings the patient was considered a Stage III and was treated initially with combination chemotherapy to be followed by radiation therapy to both the upper and lower lymph node-bearing areas. □

**While America's "archaic" medical care system chugs along, the "model" system in Great Britain soaks taxpayers \$2,400,000 annually for free wigs. Any patient who asks is given a prescription for two human hair wigs that cost \$78.20 each. Average American per capita expenditure for all out-of-hospital prescriptions in 1967 was \$16.58.**



## *Health and Medical Practice in the Choctaw Nation, 1880-1907*

WALLACE B. LOVE, B.S.  
R. PALMER HOWARD, M.D.

*The "medicine man" and the medical  
diplomat gave way to the Choctaw  
Board of Health, which energetically  
controlled a smallpox epidemic and  
organized the profession.*

IN 1831, the year after the Treaty of Dancing Rabbit Creek, the people of the Choctaw Nation began the journey west from their homes in the swamplands of Mississippi to their new country in what is now southeastern Oklahoma.<sup>1</sup> The major portion of the tribe had completed removal by 1843, but their number had been severely reduced by exposure, starvation, cholera, and smallpox, which beset them along the way.<sup>2</sup> The land to which they came was fertile and rich in game, but it was no refuge from disease and death. The superintendent for the Western Indian Territory reported:

Some parts are finely watered, while in others it is so scarce that the inhabitants are compelled to use the water of creeks and branches, which become nearly dried up, or stagnant, during summer, causing much fatal sickness among them.<sup>3</sup>

The growth of their population was greatly retarded by a high infant mortality rate;

by periodic epidemics of smallpox, scarlet fever, cholera, measles and influenza; and by tuberculosis, malaria and other diseases. Whole communities were sometimes wiped out by epidemics as in the smallpox epidemic of 1838 in which 500 residents of Skullyville, including Chief Mushulatubbe, were lost.<sup>4</sup>

In the face of disease the people turned for relief to the Choctaw doctor. At least one man or woman served in this capacity in every community. The early Choctaw doctor was not a licensed medical practitioner, and some of his practices were based on superstition. In general, however, his methods resembled more closely those of the modern physician than Hollywood's version of the "Indian Medicine Man." Practices such as bleeding, cupping and steaming the patient were doubtless of little or no value, but some of the herb remedies concocted and dispensed by the Indian doctor were at least partially effective. In 1901, Doctor D. C. Gideon, a licensed physician and the husband of a Choctaw woman, reported that the Choctaw people were well versed in the medicinal character of many plants:

In fact, the knowledge of materia medica possessed by some of the Indians is far superior to that of many men who, by their attendance at college for a stipulated time and the payment of a certain sum of money, are given a diploma.<sup>5</sup>

The Choctaws used the bark of the sassafras, cherry tree and dogwood mixed with honey in the treatment of chills; sassafras,



willow, plum root, and peppermint weed for pneumonia; baked poke root and peach leaves for boils and feverish wounds; and the roots of the broom weed as a cold remedy.<sup>6</sup> Usually the particular root or herb was boiled down to a tea. These and many other empiric remedies varied somewhat from one doctor to another, but each kept his formulas closely guarded secrets.

Following the Civil War, the non-citizen population of the Choctaw Nation grew rapidly as a result of the influx of settlers. Along with the miners, farmers and merchants, came physicians. At that time the reputation of doctors everywhere was at a low ebb. The only requirement for licensure in most states was the presentation of a medical diploma, which could easily be purchased from one of the "diploma mills" of the day. Even in the better established schools of medicine, the requirements for admission were either lax or non-existent and the one or two study sessions rarely totaled six months. For the most part, the white physician purged, blistered, bled, and administered emetics to his patients, possibly causing as many deaths as he prevented. It is no wonder that the majority of Indians preferred their own physicians to those of the white man.<sup>7</sup>

Only three states of the Union (Alabama, North Carolina and Virginia) required anything more than a diploma to obtain a medical license in 1884.<sup>8</sup> In that year the General Council of the Choctaw Nation approved an act establishing a Board of Medical Examiners which was to consist of three persons, "citizens of the Choctaw Nation, who are regular graduates of some well-known Medical College, and residents of said Nation." The Board was ordered to examine all non-citizen applicants for medical licensure, and monthly meetings were held at Atoka or other towns in the Choctaw Nation.<sup>9</sup>

Initially this law forced the premature retirement of many unqualified physicians of the Territory. Unfortunately, however, the Board found the new professional standards difficult to maintain due to problems of enforcement among non-citizens. In response to an appeal by the Board of Medical Examiners in 1899 for assistance in dealing with this problem, the Secretary of the In-

terior accepted the recommendation of the Commissioner of Indian Affairs and ruled the Choctaw law to be valid. Therefore, any person practicing medicine illegally within the Choctaw Nation was subject to removal as an intruder.<sup>10</sup> Despite this dictum, the Board found it difficult to deal with the situation since the law was not enforced. On October 24, 1900, in a report to Principal Chief G. W. Dukes, Doctor LeRoy Long, President of the Choctaw Medical Board, made the following plea:

We beg leave to call your attention especially to the necessity of enforcing the law regulating the practice of Medicine in the Choctaw Nation, and we trust that the present Council will take some action looking to its enforcement. It is notorious that many men have been and are still practicing Medicine in the Choctaw Nation in violation of the law, although they have been reported time and again. This is not only unjust to those who comply with the law, but renders futile the efforts of your Board to improve the standing of the profession in the Choctaw Nation.<sup>11</sup>

In 1904 the Board of Health of the Choctaw Nation (as it was then known) was dissolved by act of the General Council.<sup>12</sup> In that same year the United States Congress approved a bill regulating the practice of medicine and surgery in the Indian Territory. This bill provided for the appointment of a district board of medical examiners by the United States Judge of each district. The new board was identical to its predecessor in the number of its members and their qualifications, but the guidelines for consideration of an applicant's credentials were now more precisely specified. Patterning their requirements after those set forth by the Board of Medical Examiners of the State of Illinois following its investigation of the nation's medical colleges,<sup>13</sup> the new district board required that the school issuing the diploma have an entrance examination as well as "a minimum of four courses of lectures of six months each, no two of said courses to be held within one year, and having a full faculty of capable professors in all the different branches of medical education. . . ."<sup>14</sup> The law also specified a fine of \$25 to \$100 per day for illeg-



ally practicing medicine but, due to insufficient funds for enforcement, many of the local quacks continued to practice with impunity. Moreover, with the tightening of restrictions on medical licensure in many of the states, the number of irregular practitioners seeking professional asylum in the Indian Territory increased to the point that competition became intense.<sup>15</sup>

Little reliable information is available regarding health conditions among the Choctaw people from 1880 to 1907. Whereas the Plains Indians were treated by agency physicians who made detailed reports to the United States Department of the Interior, the Union Agency at Muskogee served mainly in a judicial capacity and did not employ physicians. In his yearly reports to the Commissioner of Indian Affairs, the Union Agent made no mention of health conditions among the Five Civilized Tribes except in the few years of a severe epidemic.<sup>16</sup> Information derived from family papers, later interviews, and contemporary newspapers suggests that malaria and "consumption" (tuberculosis) afflicted the Choctaws throughout the nineteenth century. Cholera, the scourge of these people during the removal and subsequent decades, disappeared before 1880. Measles was a common disease, sometimes reaching epidemic proportions, and typhoid and scarlet fever accounted for a substantial degree of morbidity and mortality.

Reports of the Choctaw boarding schools contain information regarding the health conditions of their students. For 1891 the

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*Doctor Howard is Professor of History of Medicine and held a Special Research Fellowship from the National Library of Medicine, US PHS (1-F3-LM-39, 631-01).*

superintendent of New Hope Seminary reported:

The health of the students was fairly good excepting the time when the Measles prevailed. This disease invaded the school in the latter part of January and for about two weeks seriously interrupted the regular work of the school. There was but one death at the school during the year. This girl was one of several who, owing to feeble constitution, were sick a large portion of the year.<sup>17</sup>

The New Hope report for 1892 stated: "The only untoward event during the year was the prevalence of a severe form of malarial fever during the month of October [1891] resulting in the death of four of the students."<sup>18</sup> In the same year, the superintendent of the Spencer Academy reported "very little sickness and no deaths."<sup>19</sup> Such accounts indicate the causes of morbidity among the people. Incidence and severity of contagious diseases among pupils in boarding schools, however, cannot be accepted without reservation as applicable to the general population.

In 1882-1883, smallpox broke out in the southwestern states and in Indian Territory, but apparently affected the Choctaw Nation less than the Cherokees.<sup>20, 21</sup> The disease was not reported again until 1899 when a widespread epidemic struck the Choctaw Nation. During June, 1899, smallpox appeared among the white and Negro laborers at Hartshorne but was not recognized.

The disease went by such names as "Cuban itch," "elephant itch," or chicken pox, until a visiting Negro woman spread it to Atoka in October.<sup>22</sup> Because none of the local physicians had ever seen a case of smallpox, they were hesitant to make the diagnosis. A Texas physician experienced in the disease was consulted and shortly thereafter *The Indian Citizen* carried the following article:

SMALL POX! Local physicians, assisted by Doctor Winn of Sherman, an old practitioner among small pox cases, pronounced the contagion here among the darkies "distinct small pox." All that can be, is being done to prevent a spread or further exposures.<sup>23</sup>

The citizens of Atoka appealed to the United States Indian agent, J. Blair Shoen-



felt, who in turn contacted Green McCurtain, Principal Chief of the Choctaw Nation, asking him to place a Board of Health in charge of the situation. McCurtain replied that the only such body in the Choctaw Nation was the Board of Medical Examiners, whose single responsibility concerned the licensing of physicians. To meet the emergency, the Choctaw Council on October 31, 1899, passed a law creating a Board of Health with the responsibility for the treatment and control of smallpox. To finance the effort, the Council appropriated \$10,000 for the treatment of citizens of the Choctaw Nation.<sup>24, 25</sup> The United States government followed later with a \$50,000 appropriation to defray the expense of the Board of Health in the treatment of non-citizens of the Indian Nations.<sup>26</sup>

The Act of the National Council provided mandatory vaccination of Choctaw citizens and reimbursement for physicians. Under the leadership of Doctor LeRoy Long, the Choctaw Board of Health vaccinated 8,000 Choctaws and treated about 1,000 cases of smallpox. The success of their efforts is evidenced by the following quotation from the Board's report to the Principal Chief and the General Council:

Out of the many hundreds of cases of smallpox in the Choctaw Nation, not a single full-blood Indian, and very few Indians of mixed blood had the disease, and not a single Indian by blood or inter-marriage died of the disease, and this in the face of the fact that there were nearly a thousand cases coming under our observation.

Long attributed this overwhelming success to effective vaccination and quarantine measures, and elaborated further on the epidemiology of the disease:

In the Choctaw Nation certain conditions existed which were favorable to the propagation and spread of infectious and contagious diseases. At the time the Board of Health was authorized to take charge of Smallpox the disease had existed in a mild form since early in the Spring without any systematic effort being made to suppress it. At that time the disease was known to exist at but few places but upon investigation it was found within a few days to be pretty generally distributed over

the Choctaw Nation, but especially in and about the mining towns . . . As a matter of necessity there are gathered about coal mining camps a promiscuous population at all times. This was especially true at the time the Board of Health took charge of the smallpox on account of a general strike, which was then on hand, necessitating the importation of labor from other places. The majority of these people were negroes among whom the disease was most prevalent[sic] . . . Furthermore, the Board met much opposition from Physicians who had not recognized the disease as smallpox and were very loathe to believe that the action of the board was warranted, and in some instances the board was actively opposed by them.<sup>25</sup>

Along with the vaccination of all of the citizens, quarantine measures were established and rigidly enforced wherever the disease appeared. Twenty-nine pest camps were set up throughout the Choctaw Nation and guards were employed until the last camp was closed in May, 1900.<sup>1 (p. 235), 22</sup> At times, whole communities were quarantined; for example, Atoka was quarantined for twelve days. The following item from the local newspaper reflects the degree to which the daily routine of the people was altered:

Last Lord's Day in Atoka was indeed a novel experience to the inhabitants of our village. Was there ever in its history another such a Sunday spent? Owing to the strict and rigid regulations and quarantine to check and keep under the small pox siege, no worship of any kind was allowed—not a peal of a bell called the worshipers[sic] to their respective churches; and, the strangest sight of all, even the Sunday street loafers were not on hand at their service hour as usual. Some suggested it was truly a day of rest, absolute rest. There was too much rest, and we think the next ring of the Sunday school and church bells will be hailed with delight.<sup>27</sup>

After the epidemic of 1899-1900, smallpox appeared again only briefly. In January of 1901 McAlester reported 30 cases and Lehigh 10, and Muskogee and Ardmore were also stricken. A newspaper account declared that the disease in that year was "much



more severe in its form" than the previous epidemic.<sup>28</sup> However, the problem was apparently short-lived and there are no further accounts of smallpox in the Choctaw Nation.<sup>26</sup>

The Choctaw Board of Health combated the smallpox epidemic in an admirable manner, as did others of the Indian Nations in the Territory, including the Cherokees.<sup>21</sup> Moreover, although the Choctaw Board met with only limited success in its capacity as a medical examining board, it is significant that the attempts to regulate illegal medical practice began in Indian Territory earlier than in most states of the Union.<sup>21</sup> In the period from the 1880's to 1907, the citizens of the Choctaw Nation enjoyed medical care comparable to the pioneers in the southwestern states.

#### ACKNOWLEDGMENTS

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## "Provider Agreement" Required by Law

During February the Oklahoma Department of Public Welfare sent all physicians in Oklahoma an agreement form to be signed and returned to DPW. This form is referred to by both federal law and federal regulation as a "provider agreement."

In a letter to all OSMA members Hillard E. Denyer, M.D., association president, explained that the Social Security Act was amended to provide that all Medicaid program (Title XIX) agencies must have a provider agreement. He then pointed out that in August of last year a federal regulation was issued requiring the same agreement.

In his letter Doctor Denyer stated, "The Oklahoma Department of Public Welfare had delayed implementing either the law or regulation on the grounds that the claim forms being used constitute compliance. However, the department has now been told that it risks losing federal Medicaid matching funds if a signed agreement is not obtained."

Denyer went on to state that the association's Board of Trustees had instructed him to tell the membership the board was opposed to this federal regulation and law. However, he pointed out, "the Board of Trustees is not instructing you to whether or not to sign the agreement, since participation in Medicaid is a matter of personal choice."

One of the fears expressed by the Board of Trustees was that the signing of such an agreement would allow the government to audit a physician's personal records. A report from the AMA legal counsel on this point was submitted to the AMA House of Delegates during its 1969 meeting. The report was in response to a resolution requesting that a study be made of the "legality of on-site audits in physicians' offices . . ." The report is printed in full at the end of this story.

The federal law and the federal

regulation both state that the Title XIX carrier must provide agreements with every person or institution providing services under the state plan. Any person or institution signing such agrees to the following:

"(a) To keep such records as are necessary fully to disclose the extent of the services provided to individuals receiving assistance under the state plan; and

"(b) To furnish the state agency with such information, regarding any payments claimed by such person or institution for providing services under the state plan, as the state agency may from time to time request."

The agreement sent out by the Department of Public Welfare contained identical wording.

The following is the complete AMA report on the auditing of physicians' records:

### Legal Opinion

Resolution 115 (A-69) requested that a study be made of "the legality of on-site audits in physicians' offices, their permissible extent and nature, and how they affect the confidentiality of physicians' records on their patients."

The Social Security Act provides that the state or local government agency administering a medical assistance program using funds provided by the federal government must include in plans established for this purpose procedures for determining the quality of medical service being delivered or the capability of the provider for delivering high quality medical service. The Act also provides for agreements with every person or institution providing services under the state plan to keep such records as are necessary to disclose the extent of the services provided. These requirements may be reasonably interpreted as authorizing "on-site audits in physicians' offices" to determine quality and capability for

delivery of medical service and to provide for inspection of the required records.

With regard to "confidentiality of physicians' records," the Act requires the state plan to provide safeguards which restrict the use or disclosure of information concerning applicants and recipients to purposes directly connected with the administration of the plan.

The authority of a state or local administrative agency to prescribe rules and regulations for administration of the law is well established. Investigatory or inquisitorial powers, power to inspect, or to secure or to require the disclosure of information by means of accounts, records, reports, statements, testimony of witnesses, production of documents, or otherwise are conferred on practically all administrative agencies, and these powers may be implied as well as expressed.

Among these powers is the power, for specific purposes, to *enter premises and inspect or examine such premises or things or operations therein, particularly books and records*. Some statutes authorize administrative agencies to enter and inspect such places and such records as they may deem necessary or appropriate to determine whether any person has violated any provision of the act being administered or which may aid in the enforcement of the act. However, such powers are not unbounded but are exclusively derived from and limited by the authorizing statutes.

Benefits under Title XIX of the Social Security Act are limited to those persons who specifically qualify under the terms of the Act. This serves to limit the extent of the "on-site audits" to records of Medicaid recipients. While an examination of Medicaid and non-Medicaid patients' records might not be beyond the scope of an inspection to determine



the quality of medical services generally, it would be beyond the express or implied statutory authority to insist on the right to inspect the records of patients who have neither applied for nor are receiving Medicaid.

An administrative body or official may be clothed with the authority to say when a law shall operate, or as to whom, or upon what occasion, provided the standards prescribed for guidance are as reasonably precise as the subject matter requires or permits. Statutes, ordinances or regulations which give an administrative agency an absolute, unregulated, and undefined discretion grant arbitrary powers and represent an unlawful delegation of legislative powers. The presumption that an administrative official will not act arbitrarily but will exercise sound judgment and good faith cannot sustain a delegation of unregulated discretion. The legislature cannot vest in an administrative agency the power, in its absolute or unguided discretion, to apply or withhold the application of the law, or *to say to whom a law shall or shall not be applicable*.

The general rule, which requires an express standard to guide the exercise of discretion, is also subject to the exception that where it is impractical to lay down a definite comprehensive rule, it is not essential that a specific prescribed standard be expressly stated in the legislation. In such situations the courts will infer that the standard of reasonableness is to be applied.

It is not necessary that the legislature supply administrative officials with a specific formula for their guidance in a field where flexibility and the adaptation of the legislative policy to infinitely variable conditions constitute the essence of the program.

It is a breach of professional ethics for the physician to reveal the confidential communications of his patients without the express consent of the patient, unless required by law.

Insofar as office audits of Medi-

caid patients' records are concerned the right of the government to see to the application of public funds through the inspection of records is imposed as a condition both on the provider of the medical services and the Medicaid recipient. In this situation the physician is doubly protected since he is required to open his records pursuant to law and a patient's authorization to do so may reasonably be implied since his right to receive benefits is subject to the same condition.

The same compulsion of law does not apply to records of non-Medicaid patients. Where such patients are concerned, the physician would be acting within his rights in refusing to make his records available for inspection without the express consent of his patients. Administrative rules and regulations which require disclosure under these circumstances could be opposed on the grounds that they are arbitrary and in excess of delegated authority. □

## Resurgence of Measles

A rather impressive increase in the weekly reporting of measles cases is presently being observed in Oklahoma. In addition, two outbreaks of measles, both occurring among military dependents, have been reported as of February 21st, 1970. Seventy-one cases have been reported in these two outbreaks. The vast majority of these children were unimmunized. Additional investigation is being conducted on those clinical cases who report a history of measles immunization.

One large outbreak of measles was reported in 1968 and in 1969. Both outbreaks occurred among children in rural schools whose immunization levels were inadequate. It seems safe to assume that these "pockets" of susceptibles still exist in the state.

The National Communicable Disease Center reported 5,290 cases of measles for the first six weeks of calendar year 1970. For similar periods in 1969 and 1968, 2,057 and 2,984 cases respectively, were reported. The 1970 incidence represents a 157 percent increase over 1969 and 77 percent over 1968. This increased in-

cidence appears to be a nationwide phenomenon. Much, but not all, of the increase is due to outbreaks in poverty areas in larger cities.

With the expiration of the Vaccination Assistance Act in June, 1969, federal monies for the purchase of measles and polio vaccine are no longer available. This means that the Immunization Program of the State Health Department can no longer supply county health departments with measles and polio vaccine for routine use. Most all county health departments in the state rely on the Immunization Program for their total vaccine supplies. In addition, the Indian Health Service and Community Action Program are supplied with vaccine from the Immunization Program. This deficit in preventative medical service is made much more acute when it is realized that 23 percent of Oklahoma children receive all their immunizations from county health departments. This figure represents a survey on immunization sources conducted among first grades in 75 counties from 1967 through 1969. Further, this group of children traditionally constitute the population at greatest risk for measles and polio infection. The chances of reaching this 23 percent through existing private sources would appear to be slim according to the State Health Department.

Researchers at the National Communicable Disease Center estimated that the nationwide measles immunization effort from 1963 through 1968 averted 9.7 million acute cases and 3,244 cases of mental retardation. It is also estimated to have saved 973 lives, 550,000 hospital days, 291,000 years of normal life, more than 1.6 million workdays, 32 million school years and 423 million dollars. The emotional cost of lost lives and significant residual impairments secondary to measles are incalculable.

For the present, public health immunization efforts against measles and polio have been thwarted. It appears that private medicine must redouble its efforts to immunize children against measles and polio if the potential epidemicity of these two diseases is not to be reestablished. □



## New AMA Department For Medical Specialties

In order to strengthen liaison and services to related medical organizations, the American Medical Association has established a new department of specialty societies services.

Commenting on the new appointments, Ernest B. Howard, M.D., AMA Executive Vice-President said, "The establishment of this special department is an important step in strengthening AMA's relationship with the specialty societies, and it is the accumulation of a long range program undertaken to upgrade the services of the AMA to the specialty societies."

Director of the new department is Theodore R. Chilcoat, Jr., a five-year staff member formally assigned to the AMA's Washington office. Previously he had served as the assistant executive director of the Medical and Chirurgical Faculty of Maryland. In Washington he had served as AMA liaison with national specialty societies for the Department of Governmental Relations. □

## Professional Liability In California

Providing professional liability insurance coverage at reasonable rates has become a problem for almost every medical association in the United States. In late January, representatives of twenty-six California county medical societies received a recommendation from their approved insurance carrier for a 37 percent premium increase.

Using a four class system, the rates for \$100/300 thousand limits range from a low of \$417 for a Class I to a high of \$897. In Class IV premium rates range from \$1,531 to a high of \$5,254. The high for Class IV is the insurance rating bureau's recommended premium.

The insurance rating bureau's recommended premium for the four classes range from a low of \$831 for Class I up to the \$5,254 mark for Class IV. The difference between Class I and Class II is a near doubling in premium. □

## Systems Sessions and Astronaut To Headline Annual Meeting

A new format and an astronaut will highlight the 1970 annual meeting of the OSMA in Oklahoma City, May 14th-16th. NASA test pilot Colonel Tom Stafford of Weatherford will be the keynote speaker for the president's annual dinner-dance.

The new format change for the 1970 annual meeting will revolve around "systems sessions" during the scientific portion of the program. Six of these sessions are scheduled for the three days. Each will last approximately two hours and will be of interest to several different medical specialties.

The purpose behind the system sessions is to furnish all persons in attendance with information that is new and usable when working with medical difficulties in a particular system. The six systems to be discussed are as follows: Neuro-sciences and genitourinary endocrine for Thursday afternoon, respiratory on Friday morning, cardiovascular and gastrointestinal on Friday afternoon, and transplantation-implantation on Saturday morning.

The 1970 annual meeting of the association will begin on Thursday morning with a meeting of the OSMA Board of Trustees. The first scientific session will be held Thursday afternoon.

In past years the House of Delegates has met on Friday morning and again on Saturday morning. This year, the opening session of the House will be held Thursday evening and the closing session is scheduled for Saturday morning. Reference committees to discuss the business of the association will meet on Friday morning.

According to Paul D. Erwin, M.D., annual meeting chairman, the rescheduling of the House of Delegates will allow more time for the systems sessions during the scientific portion of the meeting and will permit Delegates to attend major scientific programs.

The president's annual dinner-dance is the traditional closer for the



COLONEL TOM STAFFORD

convention on Saturday evening. It will be preceded by a cocktail party for all members and their wives and will be followed by a formal dance. During the banquet, current OSMA President Hillard E. Denyer, M.D., will turn the reins of the association over to President-Elect Ed L. Calhoun, M.D., Beaver.

Keynote speaker for the dinner-dance will be Colonel Tom Stafford. Stafford is described as a "test pilot" for the National Aeronautics and Space Administration. A native of Weatherford, Oklahoma, Stafford received his B.S. degree from the United States Naval Academy in 1952 and holds numerous honorary doctorates.

The astronaut has been in space three times and has completed five rendezvous and logged 290 hours and 15 minutes in space flight. On December 15th, 1965, he and command pilot Walter Schirra were launched into space on the history-making Gemini 6 mission and subsequently participated in the first successful rendezvous of two manned maneuverable spacecraft. His second flight was as a command pilot for Gemini 9 which began a three-day flight on June 3rd, 1966.

May 18th-26th, 1969, saw the Colonel as commander of Apollo 10 making the first comprehensive lunar-orbital flight. □





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# Blues Expand Field Staff

The growing demands on Blue Cross and Blue Shield's health prepayment mechanism have brought about a significant expansion of the Plans' Professional Relations field staff.

Representatives are now stationed in each of the five district offices, working directly with physicians and hospitals in all areas of Oklahoma.

Under the direction of Vice-President Windham E. Hill, professional relations representatives cope daily with an ever-widening variety of situations to maintain the plans' traditional relationship with physicians.

This unique relationship has been affected by a combination of factors ranging from transitional computer difficulties to government-imposed complexities.

The professional relations representatives serve as "trouble shooters" between the plans and physicians. They are the direct contacts of participating physicians with Blue Shield.

In the Tulsa office is Vice-President Windham E. Hill, who plans and oversees the functions of his department.

A veteran of nearly 20 years with Blue Cross and Blue Shield, Mr. Hill has a medically-oriented background and a degree in hospital administration.

Also in the Home Office is Lowell M. Stokes, M.D., who after 22 years as a general surgeon, joined the plans as a full-time medical advisor.

Hospital Co-ordinator Bill Legate, a former hospital administrator, serves in Tulsa as does Ron Dodson, metropolitan Tulsa Representative of the Professional Relations Department.

Eastern Division Manager John Miller, before joining the professional relations staff, served the plans for 12 years as an enrollment representative.

Under his supervision are representatives Jim Baker, who works out of the Muskogee office, and Elliott K. Gordon, who serves the Ada office area.

Milam Dunlap is Professional Relations Manager of the Western Division, whose area of responsibility includes the Oklahoma City, Lawton and Enid offices.

James Bethel serves as representative in metropolitan Oklahoma City.

The Lawton office district is served by Vernon Garrison while Maurice Higgins represents the department in the area of the Enid office. □

## SSA Inaugurates Television Series

The Social Security Administration in Oklahoma now has its own television series. The weekly thirty minute program, "Social Security Speaks," is shown on KETA-TV, Channel 13, Oklahoma City and KOED-TV, Channel 11, Tulsa, each Friday night at 7:00 p.m.

The series began on February 6th and will run through May 22nd. March shows are focused on Medicare and Medicaid. Guest panelists

on the March 20th Social Security program will be W. Ralph Bethel, President of Oklahoma Blue Cross and Blue Shield, and Cleveland Rodgers, Executive Director of the Oklahoma Hospital Association.

The program will be moderated by Russell F. Daiker, District Manager of Social Security in Tulsa. The March 20th program will start with a discussion of coverages under Part A of Medicare and an explanation of the exclusions.

The program will continue with Mr. Rodgers discussing the role of the hospital and the procedure taken by the hospital when the patient is entitled to Medicare benefits. Mr. Bethel will then bring out the role of Blue Cross as an intermediary under government contract for payment of Part A claims.

Lloyd E. Rader, Director of the State Welfare Department, will be the guest panelist on the March 27th telecast on the Medicaid program. □

## DEATHS

ALBERT C. HIRSHFIELD, SR., M.D.

1887-1970

Albert C. Hirshfield, Sr., M.D., an Oklahoma City physician for over half a century, died at his home on February 21st, 1970.

A native of Sherman, Texas, Doctor Hirshfield received his medical degree from the University of Indiana School of Medicine in 1908. He practiced in Norman from 1908 until 1914. Following his military service in World War I, he established his practice in Oklahoma City. In recent years, most of his time had been devoted to medical missionary work in Alaska, Puerto Rico and Honduras.

Recognizing his years of service to the medical profession, the Oklahoma State Medical Association presented Doctor Hirshfield with a Life Membership in 1958.

BASIL A. HAYES, M.D.

1890-1970

A long-time Oklahoma City urologist, Basil A. Hayes, M.D., died February 13th, 1970. He was a native of Stone Mountain, Georgia and graduated from the University of Texas School of Medicine in 1919. Following his residency training he established his practice in Oklahoma City.

Doctor Hayes became an instructor in the Department of Urology at the University of Oklahoma Medical Center in 1923 and was chairman of that department for ten years before his retirement as Professor Emeritus in 1954.

He had served as president of the Oklahoma City Clinical Society; was a member of the Southern Medical Association, the American Urological Association; a Fellow of the American College of Surgeons and a Diplomate of the American Board of Urology.

The OSMA awarded Doctor Hayes an Honorary-Life Membership in 1961, recognizing his outstanding service to his profession and to humanity. □



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## International Cancer Congress To Convene In Houston

The Tenth International Cancer Congress will be held in Houston, Texas, May 22nd-29th, 1970, under the auspices of the International Union Against Cancer. This union is a non-governmental voluntary organization dedicated to the international control of cancer through research, therapy and prevention. Members represent some seventy nations.

All physicians, scientists and others of professional stature must register on individual forms as Members of the Tenth International Cancer Congress. Wives, children and nonprofessional guests should register as associate members. United States members may register for \$55.00 and United States associate members may register for \$35.00.

Preliminary special sessions will be held in four Houston Hotels on May 22nd. The main Congress will meet in the Albert Thomas Convention and Exhibit Center.

Hotel and meeting reservations may be mailed to the Office of the Secretariat, Tenth International Cancer Congress, P.O. Box 20465, Astrodome Station, Houston, Texas 77025. Details concerning the points of interest in Houston and Galveston are available from the same source. □

## Texas Medicaid Benefits Cut Twenty Percent

A 20 percent reduction in Medicaid benefits will become effective April 1st for the state of Texas. The Texas Public Welfare Commission voted to cut the benefits and the state's deputy welfare commissioner said further cuts may become necessary.

The deputy commissioner, Herbert C. Wilson, said that at the present rate of spending, the Medicaid program would run up a deficit of \$42 million during the next seventeen months.

Medicaid in Texas provides free medical care for indigent recipients of old age assistance, an aid to the

blind and disabled and families with needy children. The federal government originally contributed \$4 for each \$1 spent by the state, but last July 1st the formula was changed to two federal dollars for each state dollar.

The Texas Welfare Commission said that this change in formula would cost the state an additional \$20 million in the fiscal year ending August 31st.

In addition to a reduction in the amount of federal money, the number of Medicaid recipients has risen to one half million from 350 thousand in September 1967, when the program began.

Texas has a constitutional ceiling of \$80 billion on welfare payments, of which \$75 million already has been appropriated. □

## Committee Revises Booklet on Arterial Hypertension Drugs

A revised and updated edition of the booklet, "Drug Treatment of Arterial Hypertension," has been issued by the American Heart Association for use as a reference in office treatment of hypertensive patients.

Prepared for the AHA Committee on Medical Education by Doctors Irvine H. Page and Harriet P. Dustan of the Cleveland Clinic's Research Division, the publication thoroughly reviews the current list of drugs commonly in use for treating hypertension. A table of diuretic drugs lists tablet size and maintenance dose for each, and a summary chart gives action, side effects and dose for all of the drugs discussed.

Copies of the 16-page booklet may be obtained through local heart organizations, or the AHA Central Office, 44 E. 23rd Street, New York, N. Y. 10010. □

## Sports Medicine Recruiting Members

The American College of Sports Medicine is making a concerted effort to interest more physicians in their purposes and activities. Their present membership of more than 1,300 of which more than 600 are

physicians, is comprised of physicians, basic scientists and educators who share an interest and concern for the many facets of sports medicine.

The organization was established to advance and disseminate knowledge dealing with the effect of sports and other motor activities on the health of human beings at various stages of life. Their membership includes physicians, physiologists, physical educators, dentists, nutritionists, psychologists, anthropologists, physical therapists, coaches, trainers and others interested in human fitness.

Annual scientific meetings; publication of a quarterly, *Journal of Sports Medicine and Physical Medicine and Physical Fitness*; a regular newsletter; maintaining a repository of pertinent scientific and historical materials; and a speakers' bureau are functions of the group.

The college is governed by a Board of Trustees elected by the members and an Administrative Council who implement the policies and conduct the business of several committees.

Membership applications may be obtained from Donald E. Herman, Executive Secretary, American College of Sports Medicine, 1440 Monroe Street, Madison, Wisconsin 53706. □

## Three Volumes Issued in Heart Monograph Series

Three new volumes have been published in the American Heart Association's Monograph Series as follows:

Volume 24 "Cardiovascular Surgery 1968," consists of the proceedings of the Association's Council on Cardiovascular Surgery at the Scientific Sessions held in 1968. Edited by Doctor C. Frederick Kittle, the 290-page volume contains 40 articles by the world's outstanding surgeons.

Volume 25 "A Controlled Clinical Trial of a Diet High in Unsaturated Fat in Preventing Complications of Atherosclerosis," the report of an eight-year study in Veterans Administration Hospitals of trials of a diet high in unsaturated fat. The study



included 846 elderly and middle-aged men, and indicated a drop in serum cholesterol levels. The report is by Doctors Seymour Dayton, Morton Lee Pearce, Sam Hashimoto, Wilfred J. Dixon and Uwamie Tomiyasu.

Volume 26 "The Myocardium in Hyperfunction, Hypertrophy and Heart Failure." Translated from the Russian of Professor Felix Z. Meerson of the Institute of Normal and Pathological Physiology of the Academy of Medical Sciences in Moscow, it summarizes important contributions to the understanding of myocardial metabolism and pathophysiology.

The volumes are available through local Heart Associations or the American Heart Association's Distribution Department, 44 E. 23rd Street, New York, N. Y. 10010. □

### Pfeifer Named To Health Careers Council

The appointment of R. Paige Pfeifer, 22, as Associate Director of the Oklahoma Council for Health Careers was announced recently by Kenneth Hager, the Council's Executive Director. Pfeifer will be primarily responsible for informing high school students of career opportunities in the health field.

The Oklahoma Council for Health Careers is a non-profit, tax-exempt corporation organized by Oklahoma health professional associations in cooperation with the Oklahoma Regional Medical Program. Seventy-three health related organizations are participating members of the council. The cooperative effort of Oklahoma's health professionals to solve the health manpower shortage in the state has attracted national attention in the health field.

A 1969 graduate of Oklahoma Christian College Pfeifer has been active in youth groups throughout his high school and college days. His primary responsibility will be presenting assembly programs on career opportunities in the health field.

The OSMA has donated \$3,600 to help organize and promote the Oklahoma Council for Health Careers. □

**THE BIOLOGIC BASIS OF PEDIATRIC PRACTICE.** Edited by Robert E. Cooke. New York: McGraw-Hill, 1968. 1,739 pp. plus 76 pp. index. \$24.50 (1-Vol. Ed.), \$29.50 (2-Vol. Ed.)

Pediatrics is the ideal clinical subject for close correlation with the basic sciences since the child often manifests these interrelationships in their purest form, uncomplicated by overlying problems. In the past 20 or so years the influence of pediatricians with training in a basic science on child health has been enormous. This book is a natural outgrowth of the expanding productive basic research in pediatrics. The aim of this book is a more detailed effort to focus attention on the basic science aspects underlying much of the art of pediatrics and to relate this basic science material to actual clinical practice. Cooke assembled 163 contributors who have made these correlations over the whole basic science area in this massive work.

The organization of this book differs significantly from the conventional textbook of pediatrics. It is divided into three parts. The first, "Sciences Fundamental to an Understanding of Growth and Maturation," presents a comprehensive review of cell biology, heredity and the behavioral sciences. Some may criticize this section as being too extensive for a textbook of pediatrics and not extensive enough for a text on cellular biology. However, the student who reviews Part One will be exposed to areas of human biology, an understanding of which will greatly enrich his total experience, and imparts the excitement and fascination which characterizes the developmental process.

The second part, "Anatomic and Functional Systems of the Child," forms approximately two-thirds of the book. The content corresponds to the standard American textbook, but the manner of presentation and emphasis are decidedly different. Major emphasis is given to the relation of disease to structure and function,

with attention to clinical description. For example, there are detailed, excellent discussions of pulmonary development and function, but there is no specific description of the respiratory distress syndrome, a major cause of neonatal mortality . . . a significant omission. Although less common problems, no description of tularemia or rat bite fever could be located. The reader looking for specific principles of treatment, often will be disappointed because no attempt has been made to provide this in the coverage of most disorders. A disproportionately large amount of space is given to metabolic and endocrine disorders in comparison to that given other sections. The section on the neural system is particularly well organized and contains much useful information not found in most textbooks of neurology.

The third part, entitled "The Total Child," discusses developmental processes affecting the infant, child and adolescent. In the section on the perinatal period, there are chapters on the physiology of development, principles of teratology, developmental genetics and others, presenting a unique, valuable collation of information. An example of another unique feature of this book is an entire chapter entitled "The Nature and Nurture of the Gifted Child."

The book is well printed and well bound. The prospective buyer would do well to spend a few extra dollars for the two volume set, because the single volume, which weighs ten pounds, is unwieldy. Each section has lists of specific and general references to both journals and books. In addition to the comprehensive text, the book contains many half-tone illustrations and several color plates. The index is detailed and thorough.

Comparison with other textbooks of pediatrics would probably be unfair, because the format is different. It supplements existing texts rather than being in direct competition with them. It is likely that the uneven areas and other deficiencies will be corrected in subsequent editions. It



is not certain how this book will be used. It is not likely to be popular with medical students as their only pediatric textbook, because the practical and clinical approach is not stressed. However, it is indeed an impressive compilation of the role of the biologic sciences relating to child health and human development, and represents not only a valuable contribution but also a unique textual philosophy.—*Harris D. Riley, Jr., M.D.*

**ANTIBIOTICS AND CHEMOTHERAPY.** By Lawrence P. Garrod, M.D., Emeritus Professor of Bacteriology, University of London, Hon. Consultant in Chemotherapy, Royal Postgraduate Medical School, London, England and Francis O'Grady, M.D., Professor of Bacteriology, University of London, Bacteriologist, St. Bartholomew's Hospital, London, England. Cloth, 462 pp. Edinburg and London: E. & S. Livingston Ltd., 1968.

This relatively small book of 462 pages is a rich source of information. It will be valuable to a wide range of individuals concerned with infectious diseases. This is the second edition and is dedicated to Professor Mary Barber, an author of the first edition, who died tragically in 1965 in a motor vehicle accident.

The book is divided into two main sections. The first section, which begins with a chapter on the evolution of antimicrobial drugs, deals with the specific antimicrobial agents, their pharmacology, and complications associated with their use, including the development of drug resistance. The second portion is concerned with general principles of antibacterial therapy and management of infections of various organ systems.

As with any significant review of a large subject such as this, there are numerous strong points, certain areas of weakness, and in places, discussions which appear contrary to certain current recommendations. It is written in typical British style and facts are given succinctly. The authors bring out certain points that are important but are relatively little

known. For example, in the chapter on penicillin, the observation that phenoxymethyl penicillin (penicillin V) is less active than penicillin G against gonococci and *H. influenzae* is an important but poorly appreciated fact. The discussion of the management of recurrent boils and furuncles is excellent.

On the other hand, there are certain statements which are contrary to current knowledge and recommendations. In the chapter dealing with sulfonamides, it is stated that some organisms, notably the meningococcus are quite sensitive to sulfonamides. Subsequently this statement is updated. On page 332 it is stated that "either a sulfonamide or penicillin should serve to control most streptococcal infections." It is widely accepted that sulfonamide therapy will not eradicate streptococci and it is not considered adequate treatment for infections due to such organisms. Some of the more recently described complications of various agents such as the development of Coombs-positive hemolytic anemia associated with cephalothin and the potential renal toxicity associated with high doses of cephaloridine and with methicillin are not included.

Overall, this is an excellent book and all physicians and laboratory workers in the field of infectious diseases will find it useful.—*Harris D. Riley, Jr., M.D.*

**THE GYNECOLOGY OF CHILDHOOD AND ADOLESCENCE.** By John W. Huffman. Philadelphia, London and Toronto: W. B. Saunders Company, 1968. 574 pp. \$19.50.

There have been several recent books on the gynecology of adolescence and childhood but most of these have concentrated on certain specialized aspects of gynecologic care of the pediatric patient. Huffman's book, on the other hand, provides an encyclopedic treatment of the gynecologic disorders affecting infants, children and adolescents. Twenty-seven chapters attest to the scope of the book. The presentation is authoritative and thorough. As an example, the technique of examination of the premenarchal child

merits an entire chapter. The author strongly advocates that all adolescent girls should have an annual gynecologic examination. The author has contributed two thoughtfully written chapters on "Sex and the Teenager" and "Juvenile and Adolescent Pregnancies." His strong stand in favor of sex education in the schools will be of interest. This book will be a valuable reference for the increasing number of pediatricians, obstetrician-gynecologists and others who deal with the gynecologic problems of this important segment of our population.—*Harris D. Riley, Jr., M.D.*

**SYMPOSIUM ON THE SPINE.** American Academy of Orthopaedic Surgeons. St. Louis, The C. B. Mosby Company, 1969, 289 pp. \$19.50.

This symposium emanated from a course in continuing education presented by the Committee on Injuries of the American Academy of Orthopaedic Surgeons, held in Cleveland, Ohio, November, 1967. Seventeen contributors have written articles ranging from the biomechanics of the spine to the causes and treatment of various types of injuries. Each chapter provides a list of references. The monograph is profusely illustrated with reproductions of roentgenograms as well as line drawings. It also has author and subject indices.—*Harris D. Riley, Jr., M.D.*

**FETAL AND NEONATAL PHYSIOLOGY.** By Geoffrey S. Dawes, M.D. Chicago: Year Book Medical Publishers, Inc., 1968. 238 pp. \$11.00.

Doctor Geoffrey Dawes, as Director of the Nuffield Institute for Medical Research, has been concerned with many of the major contributions in the explosion of knowledge regarding fetal and neonatal physiology. The author admirably achieves the main theme of this book which he describes as "the development in the fetus and newborn of the integrated responses which are needed to conserve their energy supply for maintenance of their internal en-



vironment, growth and development."

The book contains some 17 chapters plus an appendix dealing with certain experimental methods. It emphasizes cardiovascular, pulmonary and regulatory aspects of fetal physiology. Following an introduction, there are chapters on the comparative anatomy of the placenta, oxygen transfer across the placenta, and the relationship of the placenta to fetal growth. There are chapters dealing with the umbilical circulation, the pulmonary circulation in the fe-

tus and newborn, followed by chapters on labor and delivery, the establishment of respiration and then various disorders dealing with birth asphyxia, resuscitation and brain damage. While the first six chapters are concerned largely with the placenta and its circulation, subsequent chapters with such titles as "Labor and Delivery," "Establishment of Pulmonary Respiration," "Birth Asphyxia," "Resuscitation and Brain Damage," "Changes in the Circulation after Birth" and "Oxygen Consumption and Temperature Regulation" give the pediatric (or ob-

stetric) practitioner or the investigator a rich source of practical information applicable not only in the laboratory but also in the prenatal clinic, delivery room and special care nursery. The author devotes little attention to the kidney or immunological topics.

The cover of the book is illustrated with the familiar rectangular diagram of the fetal circulation. This book has the qualities of a textbook, a source book and a scientific autobiography. It obviously will have significant influence and is to be recommended highly. — *Harris D. Riley, Jr., M.D.* □

## Miscellaneous Advertisements

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**G.P. NEEDED** for nine-man clinic located in a 120-bed accredited hospital. Salary \$35,000 guaranteed with a percentage. City of 12,000, plus college, located in central Texas. Contact Key T, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

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**STAFF OF AESCULAPIUS FOR SALE**. Suitable for indoor or outdoor decoration. Metal, seven feet tall, \$50.00. Contact The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118. Call 842-3361.

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**PHYSICIAN, PROJECT DIRECTOR** for O.E.O. funded comprehensive health project, Tulsa, Oklahoma. Jointly sponsored by Tulsa County Medical Society and Health Department. Duties primarily administrative. Requires eligibility for Oklahoma license and experience or training in administrative principles. Salary negotiable to \$26,460. Contact —Doctor George Prothro, Director, Tulsa City-County Health Department, Tulsa, Oklahoma 74112, telephone AC-918 939-2671. □



Dear Auxiliary Members:



Mrs. Virgil Ray  
Forester

Midwinter Board Meeting on Monday, January 26th was greatly favored by the weatherman, for it seemed certain that Spring was tempting us.

The meeting held at the state medical building was well attended. Mrs. J. Hartwell Dunn,

State Auxiliary president, presided during the well-planned session at which time many interesting reports were given by representatives from various points over the state.

The guest speaker for the morning was our own Doctor H. E. Denyer, State Medical Association President, who spoke to a captive audience.

Well-informed Doctor Denyer delivered a very forceful speech concerning medical legislation with reference to our doctor husbands—and charged us to STOP—LOOK—LISTEN—STOP—and LOOK and THINK and LISTEN during these perilous, rapidly changing times.

He stated further that not only every available socio-economic article should be read in order to judge the pronouncements concerning today's practice of medicine which are forthcoming daily, but an ear should also be given to the statements and opinions of lay readers—government officials—every medical society official and the consumer as well, for our husbands are the focal point in every discussion of ours—The Number One U.S. "Industry."

The statement that over ten groups are drafting legislation at this time for compulsory health insurance was startling.

Target dates vary from 1972 to 1975.

Our own members must be exhorted to spend a few minutes each day on the salvation from a fate which is just a whisper of time away.

The state leader emphasized the fact that we members of the medical profession are in a fight for our lives and unless we join with our peers and are willing to cooperate, we shall lose ALL. Not one battle can be lost and the war won. One or two recalcitrants must not be allowed to destroy us all—

## OSMA JOURNAL / auxiliary

for the penalty is a dictatorship—a civilian, now medical dictatorship.

Quoting Doctor Denyer:

"You ask what can the auxiliary do . . . and I say you can do what you can do best. Educate us . . . your husbands.

"Learn and understand peer review . . .

"Learn and understand malpractice prevention . . .

"Learn and understand the medical manpower problem . . .

"Learn and understand pending medically-oriented legislation . . .

"Learn and understand third party pay mechanisms . . .

"Learn and understand the importance of the cooperative effort of special-interest societies . . .

"Learn and understand the mechanism and function of AMPAC and OMPAC . . .

"Learn and understand public relations techniques for improving the image of medicine . . .

"Learn and understand the working efforts of OSMA.

"Do these things and share your continuing knowledge with your husband.

"Then our small numbers will render the impact they must.

"Your reward will be the satisfaction that you have really contributed to the preservation of the private practice of medicine . . . that you have preserved a bit of freedom you and I have known . . . have experienced and cherished . . . and that we pray to pass along to our children."

The auxiliary members are most grateful to Doctor Denyer for sharing his most valuable time with us.

March 30th is Doctors' Day—God grant that we may always celebrate this coveted day with the full knowledge for which it stands—the dignity and pride manifested by our physician husbands in a medical practice free of jeopardy.

Yours in Auxiliary,  
ZELLIE

P.S.—It's a privilege to be a Doctor's Wife.



**Pill panic seems to be the result of recent hearings on birth control pills** by the U. S. Senate Subcommittee on Monopoly. Witnesses testified that publicity generated from earlier hearings had caused "panic" among women and family planning experts predict at least 100 thousand unwanted pregnancies will occur in the next few months as a result of women abandoning the pill. Washington observers noted that witnesses testified both for and against the pill, adding to the confusion, and that there were political overtones in the hearings. Some questioned whether this was a relevant subject for the committee to be studying and now see the hearings backfiring on the committee.

**Environmental pollution is challenging the Viet Nam war** as the leading issue on college campuses. *The New York Times* reports that the issues appeal to stirring demands for action that reach further than any seriously considered before. Actions being considered include sit-ins or phone-ins to immobilize at least part of the operations of large corporations such as GM to emphasize opposition to automobile pollution; take over from "lagging government" the job of getting evidence against polluters that will stand up in court; shining of large spotlights on smokestacks that take advantage of darkness to spew pollutants into the atmosphere. Not all the students agree on the proposed protest. There is a division in the ranks between those who see the job of cleaning up the environment as a lever to topple the existing society and those who believe the issue can unify young people and the so-called "establishment."

**In an interview with U. S. News and World Report**, HEW's Roger O. Egeberg, M.D., said the nation's number one health problem is the distribution of health care. Asked how soon he expected a universal health insurance system, Doctor Egeberg said, "Doctors will be completely swamped and you would have chaos" if it comes too soon. He added, "I would say it probably would be six or

seven years before you could feel that you were anywhere near ready to tackle this, without having a degree of chaos."

**Growing acceptance of the concept that health care is a "right"** has caused some legal experts to raise some questions: The word "right" is a legal concept. It is a privilege enforceable by law. If you do not get it, you can sue someone. But the question we have not resolved is, "enforceable against whom?" Is it enforceable against the M.D., or the chairman of the board of trustees of the hospital, or the president of the medical center, or the secretary of the HEW? The consumer is puzzled by this, but he is still going to ask questions: "Who is responsible? Whom may I sue? From whom may I demand these services?"

**Organized crime has put a \$100 black market price on stolen credit cards.** All persons are being urged to keep a record of their credit card numbers so that they can quickly notify the issuer at once in case of a loss. A person should destroy any cards that he does not need, including unsolicited ones that he does not want. Credit card insurance might be considered. A number of different companies offer it.

**Foreign body left in the patient during surgery** is the most common reason for suing M.D.'s for malpractice according to a recent survey in the *Medical World News*. Others included: Untoward result of tight casts; technical surgical errors; lack of informed consent; errors of resident, intern or nurse; adverse reaction to penicillin or tetanus shots; abandonment of obstetrical patients; burns due to x-ray, diathermy or chemicals; neglecting to properly attend the surgical cardiac arrest. As target defendants in malpractice suits, medical specialties ranked as follows: orthopedic surgeons, general surgeons, neurosurgeons, anesthesiologists, OB-GYN, radiologists, ophthalmologists, urologists, GP's, otolaryngologists, and pediatricians.

**Medical issues are involved in an estimated 80 percent of all civil litigation** and serious criminal cases. This is one reason there is a growing number of specialists who hold both M.D. and Law degrees. There are 205 in the United States now with 50 M.D.'s currently enrolled in law schools. □



The

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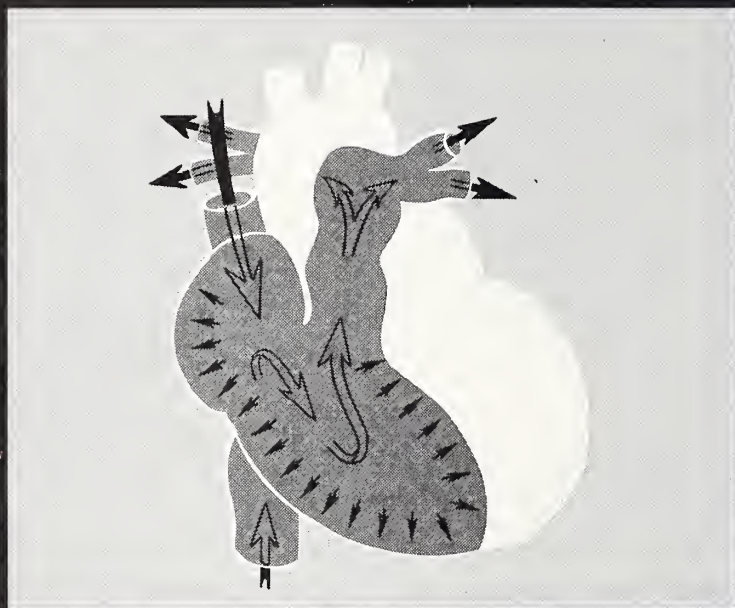
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\*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

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## *The Phony Crisis*

IT SEEMS there is a crisis in health care in this nation. Loudly proclaimed and poorly substantiated this crisis is, by popular innuendo, the doing of the dastardly medical profession. By implication it is the direct result of the greed and societal neglect practiced by generations of self-serving and irresponsible physicians.

It is a phony crisis and the medical profession is its fictitious villain.

Crisis conditions must be relative to the general condition which prevailed at some time or place. It is nonsense to suggest that our current crisis is relative to this nation's health-care condition in 1930 or 1900. It is preposterous to suggest that it is relative to the general health care conditions which prevail in Great Britain or India or South America. The widely publicized "health care crisis" in this nation today is relative only to some utopian dream conjured up by vote-hungry politicians and hard-core socialists. No one can deny that we are encountering problems in continuing to improve the health care for our citizens but these problems do not constitute a crisis and they are not the doing of the medical profession.

Our health care problems result from the following facts: Our population is expanding more rapidly than is our production of medical care personnel; effective medical services are rapidly multiplying; population densities have shifted so sharply that care resources and facilities have been unable to maintain geographic balance.

As a nation, we seem disinclined to move rapidly to curtail the expanding population and, as communities we are similarly disinclined to provide more educational facilities for the training of medical personnel. We don't adequately support the ones we have.

It is an irony that advances in medical therapeutics and technology can create additional burdens. For example, what purpose could be served, fifty years ago, by the constant vigilance of nurses, physicians and aides at the bedside of a patient with an acute

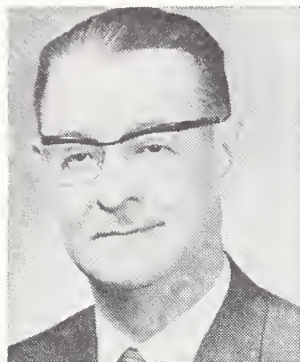
myocardial infarction? In today's awesome coronary-care unit the answer is obvious. As our capability for reducing morbidity and mortality due to disease and injury increases, our burdens also increase. Only in preventing disease and injury can we lighten our load. As a society we are not devoting enough talent and attention to preventive medicine, environmental hygiene, industrial safety and accident prevention.

Shifting populations create sharp disparities in the adequacy of health care facilities. It is one thing to move an individual from a small town to the city and quite another thing to relocate his share of a hospital and its staff. It is paradoxical that communities which have an abundance of capable health care specialists will not provide suitable facilities while communities which have no personnel resources will construct spacious, modern, well-equipped buildings. Thus we find large, competent hospital staffs working in dirty, crowded, urban ruins while a thoroughly adequate small town hospital fails to attract the professional personnel so essential to the performance of its role.

From the standpoint of having abundant, effective medical care no nation in man's history has been as fortunate as ours is today. Certainly we have problems and some of them are growing, but there is no prevailing crisis in medical care. The real crisis will result from our continued failure to solve the real problems. Although we are spending billions of dollars in a massive effort to buy medical care, we are not strengthening or expanding the sources of that care and we are not decreasing the work that must be done.

We are exhausting ourselves in a struggle which is not solving our problems. This is a crisis. *M.R.J.* □





This organizational year has been one filled with crises not generated by the usual functions of an organization traditionally dedicated to promotion of professionalism. In particular they have been caused by social pressures which men

of medicine have neither caused nor have the ability to control.

These "unplanned" pressures have occupied the attention of our officers, councils, committees and staff. Some of the activities I had planned early in the year were prevented or at least pre-empted. At the same time they spurred us on in other equally important fields and hopefully brought all of us closer to the point at which unanimity of thought and action become one. This is especially important in those fields which threaten our privilege to promote professionalism in the future.

This year our emphasis has been toward improving our internal communication, toward improving our planning on a long range basis and to better delineate our immediate and more remote goals. At the same time we have attempted to bring all of our membership to full knowledge of our increasing involvement and relationship with third parties. These government agencies and private organizations are making a life's work of providing payment for our services and also for those of all ancillary services to our care of the sick. Third parties are not just local, state and federal government programs which openly wield leverage upon us by financing 37 percent of the total, but they also

include the voluntary and private organizations who are involved in supplying at least another 45 percent.

Obviously, the voluntary efforts of our dedicated officers, councils and committees can be improved, but I can tell you from first hand knowledge that these fine colleagues have given effectively of their time and talent to serve us all. To guide our voluntary efforts, our professional staff has worked long and well. That continuing dedication which they exhibit is far beyond that which we have reason to expect, and has extended our effectiveness out of proportion to our members and theirs.

To summarize a year of observation in one page can hardly be done. I can only tell you again in another way that your salvation and the fate of medicine depends entirely upon whether the individual physician is willing to take a few minutes each day to acquaint himself with the facts readily available to him . . . to actively and effectively associate himself with his local county society, his state medical association and the AMA. He must attend and promote his special interest society and make certain that its function is synergistic, complementary and coordinated with the central medical organization. He must identify himself in the promotion of events and efforts to make his community a decent, law abiding, progressive place in which to live with family and friends.

If this sounds like too much for you to do, then remember that in your lifetime this organization may have none of these problems. The office to which you elected me—the greatest honor of my professional life—will become a political appointment rather than your elective choice.

Doctor Calhoon and his organizational staff are preparing to assume current problems and new challenges yet to come. He will need the dedication of time, effort and understanding of each of us. He will have mine.

Sincerely yours,

*Willard E. Denyer*



## Treatment of Burns of the Hands

LEONARD H. BROWN, M.D.

*Disability of the burned hand may be prevented by proper early care and continued aggressive management.*

**M**OST PATIENTS hospitalized for burns have some hand involvement. Seventy-five percent of the patients admitted to the Brooke Army Medical Center burn unit from 1952 through 1954 had burns of one or both hands.<sup>10</sup> This predominance of hand burns is due to their exposed position and to their use in attempts to fight the fire or to protect the face against flame.

During the first few weeks of treatment of the burn patient the preservation of life often requires so much attention that care for the burns of the hands is subordinated. Skin grafts are usually applied to the larger burned areas where they require less time and contribute more to the patient's improvement. When the patient's general condition has improved and is no longer a problem often the hands are seriously deformed by scars. Early attention to the hands can help prevent deformity.

Edema of the hands should be minimized by elevation, keeping them at a higher level

than the heart, either by the use of slings or by tape strappings to the dressing. Resting of the hands on pillows is usually not effective. Occlusive dressings applied with an abundance of gauze between the fingers help prevent swelling during the first days of treatment. They should be applied with just enough tension to feel "doughy" and should have no constricting bands.

Burned hands if allowed will assume a claw position with the wrist flexed, the metacarpophalangeal joints hyperextended and the proximal interphalangeal joints flexed. If left in this position scarring of the ligaments and tendons takes place, leading to permanent deformity. This deformity can be reduced or prevented by exercise and by splinting with the wrist slightly extended, the metacarpophalangeal joints flexed at right angles and the thumb abducted.

Infection should be controlled in the hands as elsewhere by frequent dressing changes, systemic antibiotics and topical applications such as sulfamylon or garamycin. Washing, exercising and debriding the hands in water for 30 minutes twice daily will also reduce infection. Tap water is satisfactory but mild soap or an antiseptic may be added. In 1901, Wilms<sup>13</sup> advised early excision and grafting of small deep burns. Moncrief,<sup>10</sup> Dallas-Ross,<sup>3</sup> and Peacock<sup>11</sup> believe this method is of particular value in treating burns involving the dorsum of the hand. In this area only a thin layer of tissue



separates the skin from the underlying tendons and joints and infection and scarring associated with even a deep second degree burn can involve these deeper structures and cause deformity.

If the patient's condition permits, excision and grafting should be performed as soon as the depth of the burn is known. Although this may not be obvious immediately, usually by 14 days excision can be complete. If after excision of the burned area the surgeon is not certain as to the viability of the underlying and adjacent tissue, homografts used as a temporary dressing keep the graft bed in ideal condition and control infection. These should be removed in four days, additional debridement performed as necessary and autografts or additional homografts applied. If possible the dorsal veins and the layer overlying the tendons should be preserved. If tendon, joint capsule or bone are exposed a full-thickness flap will be necessary. Millard's principle of using the pedicle flap only to carry fatty tissue and vessels to cover the tendons may be used. In this technique the flap is replaced in its original position after one week leaving only a thin layer in the recipient site.<sup>9</sup> This layer serves as the bed for a split-thickness graft. Usually tendons and capsule are not excised as it is difficult to determine their viability. It is better to let spontaneous separation occur if necrosis of these structures is suspected.

Excision should be carried laterally so that the scar between the graft and the remaining skin is along the midlateral line of the hand or finger, even if this means sacrificing a small amount of normal tissue. Contracture of a scar in the midlateral line does not cause deformity as frequently as

does contracture of palmar or dorsal scars. Third degree burns of the palm are unusual because of its thickness and relatively protected positions. Due to the special nature of the volar skin and the protection offered the tendons by the palmar fat pad, early excision of the palmar skin is not attempted. It is better to wait for spontaneous separation than to run the risk of removing irreplaceable tissue.

Usually occlusive dressings are applied following grafting. Larson<sup>8</sup> advocates the open method with skeletal suspension of the hands by wires through the wrist and fingers for ten days after grafting. In this method he uses no sutures and the grafts are left exposed.

Movement of the hands should be encouraged, restricting activity only as necessary for prevention of edema, maintaining graft integrity and preventing deformity. Tanking sessions should be exercise sessions. The hand should be used during the day when dressings are off but at night dressings and splints are used to protect the grafts and to prevent contractures. The use of plastic gloves lined with liquid silicone impregnated gauze has reduced discomfort and encouraged mobility.<sup>12</sup>

Dynamic splints are of use during the convalescent phase to prevent contracture. A mild degree of metacarpophalangeal joint stiffness or proximal interphalangeal joint flexion contracture may respond to dynamic splints but as a rule these splints cannot cure contractures that have already formed.

Most of the hand deformities following burns are due to contractures involving chiefly the skin. In a series of 359 contractures of the hand only 30 involved the underlying tendons and joints while 286 involved the dorsal skin and 43 the palmar skin.<sup>7</sup> Others report a higher incidence of contracture of deeper structures especially the metacarpophalangeal joint and a higher incidence of palmar contractures.<sup>5</sup> Destruction of the central slip of the extensor tendon by heat or infection may cause buttonhole deformities of the fingers. In this condition the lateral portion of the tendons are displaced anteriorly causing flexion of the proximal joint and extension of the distal joint. Contractures, if present, require surgical intervention. Corrective surgery should be

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undertaken as soon as the area is healed, infection is controlled and the patient's general condition permits.<sup>7</sup>

The contracture of scars on the back of the hand are usually treated by excision of the scar and covering the area with an intermediate or thick split-thickness graft as in early excision and grafting. Excision should be carried to the midlateral line of the palm and fingers. Palmar contractures may cause marked deformity with the fingers lightly adherent to the palm but may still respond to excision of the scar and grafting. In the palm the deeper structures are protected by the thick fat pad and are less frequently affected by the burn or scar. A narrow scar contracture of the palm may be corrected by a "Z" plasty alone but usually the addition of small full-thickness grafts will be required. Even major contractures of the volar surface of the hand can be treated by multiple excision of the scar and insertion of separate small grafts. The best donor site is the groin where the skin is thin, flexible and relatively hairless. Occasionally excision of a major part of the palm skin and application of a large full-thickness graft will be necessary. These grafts are prone to become very dark especially on dark skinned patients. The skin below the malleoli of the ankles may give better color match for palmar grafts.<sup>4</sup> If extensive deep destruction of the palm or back of the hand results in tendon exposures a full-thickness flap or tube pedicle graft should be used.

Contractures of the webs between the fingers require the insertion of a graft. The incision should be so designed that contracture of the scar does not cause recurrence of the deformity.<sup>1</sup> In adduction deformities of the thumb a full-thickness graft or pedicle is usually inserted.<sup>6</sup> Release of the transverse head of the abductor pollicis muscle and the first dorsal interosseus muscle will allow additional abduction. Post-operatively the thumb is splinted in abduction by a Kirschner wire through the first and second metacarpal. Extension deformities of the metacarpophalangeal joints are due to shortening of the collateral ligaments and adhesions between the synovial capsule and the head of the metacarpal. To allow flexion the collateral ligaments must be divided and the synovium freed from the metacarpal head.



Figure 1. April 22nd, 1969. Initial excision of burn. Additional necrotic skin excised later from index finger.

These structures can best be approached through a longitudinal incision in the extensor tendon. If extensor tendon lengthening is performed it should be away from the area of scarring. When the skin and deeper structures are both involved they are most effectively corrected at the same operation as both tend to recur if the deformity is not fully corrected.<sup>5</sup> After capsulotomy a split-thickness graft may be applied but if, after extensive procedures, the bed is not adequate for a split graft a flap is used.

Rarely scarring and contracture of the intrinsic muscle forces the metacarpophalangeal joint into flexion and the interphalangeal joint into extension. This intrinsic-plus deformity may be caused by asphyxiation of the muscles due to local edema. Excision of the triangular segment of the lateral band mechanism and release of the interossei origin are procedures most often used for this condition.<sup>2</sup> In severe metacarpophalangeal deformity with subluxation the metacarpal head is resected.

Treatment of the buttonhole deformity is usually unsatisfactory. Reconstruction of the central portion can be attempted or partial correction can be obtained by release of the insertion of the central tendon from the distal phalanx. Often fusion of the proximal joint in a position of function is necessary.

The following case is illustrative of the early treatment of burns of the hands.

J. S. a 23-year-old white male was burned on April 20th when he fell while carrying a bucket of hot tar. On April 22nd when he



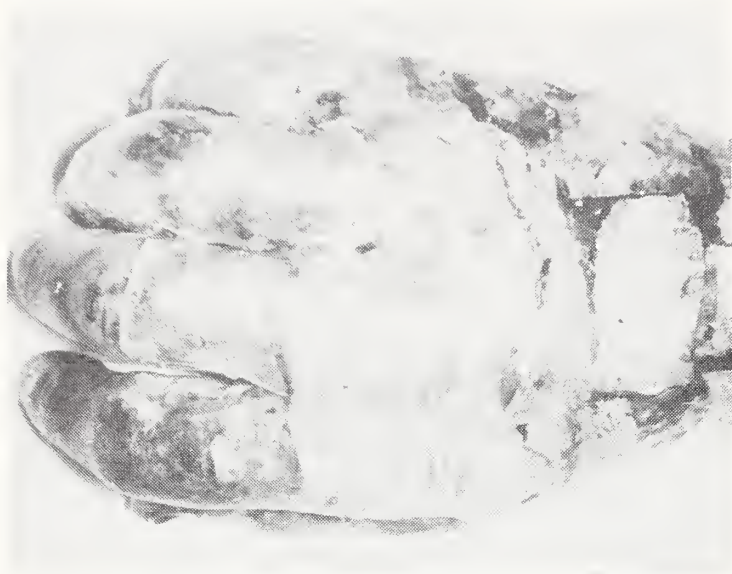


Figure 2. Homografts applied prior to complete demarcation.

was transferred to the Tulsa Burn Center his general condition was good. Burns were present on both hands, both forearms, the right thigh, the right knee and the right leg. Areas of third degree burn included most of the back of the right hand and fingers and scattered small areas in the right palm and both forearms. The rest of the burns were second degree. The right hand was edematous with markedly diminished sensation and circulation to the fingers. On April 22nd the obvious areas of third degree burn on the back of the hand were excised, including most of the dorsal veins. The hands were covered with occlusive dressings, splinted in a position of function and kept elevated by the use of slings. The rest of the burns were treated with sulfamylon and daily tub-



Figure 3. August 6th, 1969. Slight digital flexion contracture present.

bing. On April 23rd right hand sensation and circulation had improved. On April 24th, 26th and 28th additional areas of necrosis were excised from the right hand and homografts applied. After April 24th the left hand was treated twice daily with tubing and sulfamylon. On May 2nd, the homografts were removed from the right hand and autografts were applied.

Dressings to the right hand were changed on May 5th and on May 7th daily tubing and sulfamylon applications were started.

On May 14th autografts were applied to the scattered areas of third degree burns on both forearms and to small areas on the volar and dorsal aspect of the right hand. On May 21st physiotherapy to the right hand was started. On July 16th, 1969 revision of the tips of the right fourth and fifth fingers was performed and a full-thickness graft from the grain inserted to release contracture of the third web space. Dynamic splints were used to minimize contracture of the fingers. Almost complete function has returned (Figures 3 and 4).

Additional release of progressive contractures of the right index, ring and little finger was performed on December 22nd, 1969 with insertion of diamond-shaped full-thickness grafts.

#### SUMMARY

1. Early attention to burns of the hands is recommended with early excision and grafting when possible.
2. If the patient's general condition pre-



Figure 4. Lack of complete flexion of the little finger.



vents early hand surgery proper splinting, dressing and local care should be used.

3. If contracture occurs surgical treatment should be carried out when infection is controlled and the patient's condition permits. □

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# Exudative Enteropathy

ALEXANDER W. PIERCE, JR., M.D.

*With improved understanding and clinically applicable diagnostic techniques, this pathophysiologic process is being recognized with increasing frequency in a wide variety of disease states.*

**D**URING the past decade effective utilization of radioisotope-labeled proteins and macromolecular compounds for the *in vivo* study of protein metabolism has led to exciting advances in the understanding of pathophysiologic events in a wide variety of gastrointestinal disorders. Previously held concepts have been modified, revised, or, not infrequently, discarded; and new syndromes and specific pathologic entities have emerged. The exudation of serum proteins into the gastrointestinal tract has been demonstrated to be a common pathophysiologic event, not only in a wide variety of gastrointestinal disorders, but in many patients whose hypoproteinemia was once termed idiopathic.

Deficient hepatic protein synthesis was originally held to be the explanation for hypoproteinemia occurring in patients with many gastrointestinal and hepatic disorders.

Albright<sup>1</sup> in 1950, presented metabolic balance data demonstrating increased albumin catabolism in a patient with idiopathic hypoproteinemia. Radioisotopic studies subsequently confirmed Albright's observations and, in 1957, Schwartz and Thomsen<sup>32</sup> coined the term "hypercatabolic hypoproteinemia" to describe the pathophysiologic defect in patients with idiopathic hypoproteinemia or "nephrosis without nephrosis." Comparison was made to red cell metabolism in hemolytic anemia.

Although Welch, *et al.*,<sup>43</sup> had suggested excessive loss of protein through the bowel wall as early as 1937 on the basis of observed high fecal nitrogen outputs, it was not until the observations of Citrin, Sterling and Halsted,<sup>5</sup> twenty years later, that the gastrointestinal tract was accepted as the major locus for increased protein "catabolism" in these disorders. These investigators were able to account for the excessive protein catabolism in a patient with giant rugal hypertrophy of the gastric mucosa through the recovery of labeled albumin from the gastric lumen. Although no increased fecal excretion was noted, it was pointed out the digestive capacity of the gastrointestinal tract with hydrolysis of proteins to their constituent aminoacids could preclude such a finding. Protein exuded into the gastrointestinal tract and digested to its constituent aminoacids represents a loss of protein to the body comparable to protein loss in the urine in the nephrotic syndrome. Although the aminoacids may be subsequently reabsorbed, losses into the intestine exceeding the ca-

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capacity of the liver to synthesize albumin necessarily leads to hypoalbuminemia. Following the observations of Citrin, *et al.*, Gordon<sup>9</sup> and Schwartz and Jarnum<sup>31</sup> successfully used a synthetic polymer, polyvinylpyrrolidone, to effectively document the loss of large molecular weight compounds such as serum proteins into the gastrointestinal tract.

The role the normal gastrointestinal tract plays in protein catabolism has not been definitely elucidated. Data presently available would suggest that in the normal individual the gastrointestinal tract plays a demonstrable but relatively minor role in protein catabolism.<sup>41</sup> Hepatic protein anabolism is relatively limited in its reserve with the capacity for approximately a two-fold increase in synthetic rate.

“Exudative enteropathy” has emerged as a well defined pathophysiologic syndrome which can produce a specific symptom complex associated with such widely disparate primary etiologies as constrictive pericarditis, tuberous sclerosis, mucoviscidosis, or regional enteritis (Table 1). Edema of variable severity and quite comparable to that seen in the nephrotic syndrome may develop in patients with exudative enteropathy. As in the nephrotic syndrome, this edema is due to secondary aldosteronism, which is stimulated by hypovolemia and decreased serum osmotic pressure and results in salt and water retention. A far wider variety of proteins are lost, however, by the patient with exudative enteropathy than is the case in the nephrotic syndrome. Serum globulins are lost in sufficient quantity to produce depression of serum levels rather than the elevation seen in the nephrotic syndrome.

These patients do not tend to develop hyperlipemia. This contrasts not only with the nephrotic syndrome but with the very unusual patient with anabolic analbuminemia, who tends to have elevated serum globulins and serum lipids.<sup>10</sup>

All classes of plasma proteins may on occasion be lost into the gastrointestinal lumen, and a wide variety of laboratory techniques have been used to attempt to identify and quantitate this exudation. Specific antisera, electrophoresis, immunoelectrophoresis, and radioisotopic labeling have been utilized in attempts to identify one or more of the plas-

Table 1  
EXUDATIVE ENTEROPATHY

ETIOLOGY	
Acute Gastroenteritis	Hypogammaglobulinemia
Allergic Gastroenteropathy	Infectious Mononucleosis
Amyloidosis	Intestinal Lymphangiectasia
Atrophic Gastritis	Kwashiorkor
Carcinoid Syndrome	Mucoviscidosis
Chronic Pancreatitis	Nephrotic Syndrome
Congestive Heart Failure	Non-Tropical Sprue
Congenital Megacolon	Polyposis
Constrictive Pericarditis	Post-Gastrectomy Syndrome
Crohn's Disease	Regional Enteritis
Gastrocolic Fistula	Scleroderma
Gastrointestinal Neoplasia	Sjogren's Syndrome
Gastrointestinal Parasites	Tropical Sprue
Gastrointestinal Tuberculosis	Tuberous Sclerosis
Giant Rugal Hypertrophy	Ulcerative Colitis
Gluten Enteropathy	Urticaria Pigmentosa
Hepatic Cirrhosis	Whipple's Disease

ma protein moieties in the gastrointestinal lumen or its secretions. Synthetic polymers of high molecular weight have been used to attempt quantitation of losses in specific molecular weight ranges.

#### DIAGNOSTIC TESTS

Early studies using radioiodinated albumin demonstrated the short half-life of plasma albumin associated with a low total body pool. Synthetic rates for albumin may be within normal limits or increased to twice normal. The demonstration of markedly increased catabolism led to the term “hypercatabolic hypoproteinemia.” Citrin, *et al.*,<sup>5</sup> utilized intravenous radioiodinated albumin in a patient with giant rugal hypertrophy and collected gastric secretions through a nasogastric tube. Through the utilization of this technique these investigators demonstrated sufficient protein could be found in the gastrointestinal tract to explain the “hypercatabolic” state.

In an attempt to demonstrate transudation at more distal sites in the gastrointestinal tract Jeejeebhoy and Goghil<sup>19</sup> extended the technique by administering intravenous radioiodinated albumin simultaneously with the oral administration of a cationic exchange resin to trap the radioiodine. While this technique will demonstrate protein loss in the presence of gross pathology, quantita-



tion and fine measurement are interfered with by the excretion of iodine produced by the intrinsic catabolism of protein. Significant quantities of iodine so released are excreted by the salivary and gastric glands.

Waldmann<sup>36, 37</sup> suggested the following characteristics for the "ideal" radio-label for the detection of gastrointestinal protein loss:

1. The labeled protein should behave in a normal metabolic fashion with neither survival or distribution altered by the label;
2. The label should not be absorbed from the gastrointestinal tract;
3. The label should not be excreted into the gastrointestinal tract;
4. The label should be easy to detect and quantitate;
5. The label should be safe.

Gordon<sup>9</sup> and Jarnum<sup>14</sup> utilized a radioiodinated synthetic macromolecule, polyvinylpyrrolidone, to study gastrointestinal protein loss. Polyvinylpyrrolidone is not catabolized or reabsorbed by the human gastrointestinal tract, hence radioactivity detected in the stool reflects that portion of an intravenously administered dose lost to the gastrointestinal tract. If appropriate molecular weight polyvinylpyrrolidone is utilized inferences regarding protein loss can be made by analogy.

As a synthetic macromolecular polymer, however, polyvinylpyrrolidone has a wide spectrum of molecular weights; and synthesis cannot be sufficiently standardized to prevent variation in norms. Thus, with separate preparations, normal values change; and measured loss may change without change in disease activity.<sup>8</sup>

Andersen and Jarnum<sup>2</sup> utilized another polymer, the modified naturally occurring polysaccharide polymer dextran, to study patients with gastrointestinal protein loss. Jarnum<sup>17</sup> studied the excretion of <sup>59</sup>Fe-labeled Iron Dextran in conjunction with measurement of <sup>131</sup>I-polyvinylpyrrolidone and <sup>51</sup>Cr-Albumin excretion. Although this polymer also varies in molecular weight and configuration and it has been suggested there may be some iron retention in the gastrointestinal mucosa, a linear relationship be-

tween gastrointestinal <sup>59</sup>Fe clearance and the increased fractional catabolic rate was demonstrated. This was interpreted as confirming Waldmann's observation<sup>38</sup> that "endogenous" protein catabolism plays a minor role in the production of hypoproteinemia in patients with protein losing enteropathy. Gastrointestinal <sup>59</sup>Fe clearance was superior to the percentage of administered dose excreted in correlation with the fractional catabolic rate. The absence of urinary <sup>59</sup>Fe excretion renders quantitative stool collection easier since urinary contamination is not a problem.

Gale and Farr<sup>7</sup> utilized rabbit anti-human serum albumin to detect albumin in the stool of normal patients and patients with gastrointestinal disease. Abnormal protein loss can frequently be demonstrated although protein lost high in the gastrointestinal tract may be enzymatically hydrolyzed and not detectable by this technique.

Chromium<sup>51</sup> is neither absorbed from nor excreted into the gastrointestinal tract in significant quantities. Waldmann<sup>35, 36</sup> has demonstrated the effectiveness of <sup>51</sup>Cr-labeled albumin in detecting gastrointestinal protein loss and quantitating it. Difficulties are encountered in recovering the radioactive chromium, however, and the measured half-life of serum albumin is markedly shortened by labeling with radioactive chromium. The latter phenomenon is the artifactual result of instability of the chromium label. Nevertheless, <sup>51</sup>Cr-labeled albumin is the most effective clinical diagnostic test currently available.

<sup>67</sup>Cu-ceruloplasmin is highly effective in demonstrating excessive protein loss into the gastrointestinal tract.<sup>38</sup> <sup>67</sup>Copper is poorly absorbed from the gastrointestinal tract and not actively excreted; and <sup>67</sup>Cu-ceruloplas-

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min is not metabolized significantly different from unlabeled ceruloplasmin. From ten to twenty percent of normal ceruloplasmin catabolism is accounted for by gastrointestinal loss. The preparation of  $^{67}\text{Cu}$ -ceruloplasmin is arduous and expensive, however, and the copper isotope has a short half-life. As a consequence, this material does not adapt itself to routine use in the clinical diagnosis of the exudative enteropathy syndrome.

#### INTESTINAL LYMPHANGIECTASIA

Waldmann, *et al.*,<sup>39</sup> in a study of 20 patients referred to the National Institutes of Health with idiopathic hypoproteinemia, described 12 patients with histopathologically demonstrable abnormalities of the intestinal lymphatics. Lymph vessels in the mucosa and submucosa were variably dilated, on occasion severely enough to produce distortion of the villi. Foamy macrophages were noted within the dilated lymphatics as well as in yellowish nodules along the serosal lymphatics.

Serosal lymphatics were grossly dilated and segmental red-brown pigmentation of the small bowel was noted. Retrospectively, Ringsted<sup>30</sup> attributes the original description of these pigmentary changes to Wagner in 1861. Histologically this pigment is in the cytoplasm of the smooth muscle of the external muscularis mucosa. It has the histochemical characteristics of the lipogenic pigment ceroid.

Waldmann suggested the term "intestinal lymphangiectasia" to describe the histopathologic finding of dilated lymphatic channels in the mucosa and mesentery of the small bowel associated with gastrointestinal protein loss. It was suggested a presumptive diagnosis could be based on the presence of hypoproteinemia due to gastrointestinal loss associated with steatorrhea, normal carbohydrate absorption, and exclusion of known conditions associated with a similar clinical picture.

Clinically patients with intestinal lymphangiectasia present with hypoproteinemia associated with varying degrees of dependent edema. In addition to chylous effusions into the gastrointestinal lumen there may be chylothorax or chylous ascites. More recent-

ly, Offerijns<sup>26</sup> has described a patient with exudative enteropathy associated with congenital abnormalities of the lymphatic system, chylous ascites, and lymphopericardium.

Pomerantz<sup>29</sup> studied four patients with intestinal lymphangiectasia with lower extremity lymphangiograms; all were abnormal. Two patients had hypoplasia of the lymphatics in a single extremity, one had hypoplasia of the inguinal, pelvic, and retroperitoneal lymph nodes, and, the fourth, obstruction of the thoracic duct. Stoelinga<sup>33</sup> suggests local familial lymphedema (Milroy's disease) and protein losing gastroenteropathy should be considered "nosologically identical." Congenital malformations of the lymphatics may on occasion be associated with vascular abnormalities as well, and Caplan<sup>4</sup> recently reported a child with angioosteohypertrophy (Klippel-Trenaunay-Weber syndrome) with cutaneous hemangioma, varicosities, and hypertrophy of soft tissue and bone associated with intestinal lymphangiectasia.

Patients with intestinal lymphangiectasia exhibit a two-fold immunologic defect, reduced serum immunoglobulin levels and lymphocytopenia.<sup>34</sup> Fractional catabolic rates for the immunoglobulins are significantly increased, but antibody responses are prompt. Peak titers tend to be lower than in control groups, but this is probably of little clinical significance.

The deficient lymphocyte pool and lymphocytopenia, by contrast, are of considerable clinical significance. Delayed hypersensitivity is significantly impaired and Strober, *et al.*,<sup>34</sup> observed a patient with tuberculous constrictive pericarditis whose negative tuberculin skin test converted to positive following pericardiectomy and relief of lymph stasis and secondary lymphocytopenia.

Waldmann<sup>39</sup> originally suggested two alternative explanations for the mechanism of protein loss in patients with intestinal lymphangiectasia, rupture of dilated lymphatic vessels or transudation from intestinal capillaries in association with obstruction of the mesenteric lymphatics. Stoelinga, *et al.*,<sup>33</sup> were able to obtain grossly chylous fluid from the small intestine through a duodenal tube in a patient with intestinal lymphangiectasia. This chylous fluid contained a wide spectrum of proteins including immunoglo-



bulins, albumin, transferrin, and both alpha and beta globulins. By utilizing plasma disappearance curves for intravenously administered Evans blue labeled albumin in conjunction with duodenal aspiration, these investigators were able to demonstrate close correlation between plasma levels and levels in the gastrointestinal chylous effusion. Fatty acid analyses of this chylous effusion revealed a complete absence of low molecular weight fatty acids with large quantities of high molecular weight and unsaturated fatty acids.

On the basis of electron microscopy studies of jejunal biopsies, Ores, *et al.*,<sup>28</sup> postulated the protein loss in patients with intestinal lymphangiectasia to be through increased goblet cell activity. These investigators were unable to detect evidence of disrupted or damaged walls in the dilated intestinal lymph vessels. The goblet cells were noted to contain an increased amount of liquefied mucous which seemed to extrude into the intestinal lumen.

#### THERAPY

Waldmann,<sup>39</sup> in the original description of intestinal lymphangiectasia, noted no satisfactory treatment was available. In his hands, gluten restriction, adrenocorticosteroids, had segmental resection of the intestine and proved generally ineffective. Some symptomatic relief was achieved through the use of saluretic diuretics and a low salt diet.

Hargrove, *et al.*,<sup>11</sup> reported a 13-year-old girl with intestinal lymphangiectasia associated with hookworm infestation who improved following steroid therapy after the steatorrhea and tetany failed to respond to eradication of the parasites. Continued unrecognized parasitism may have played a role, however, and the patient ultimately expired with nocardiosis.

Several investigators<sup>20, 33, 42</sup> noted early the symptomatic benefit which could be achieved by a low fat diet in patients with intestinal lymphangiectasia. Serum protein levels increased and edema was reduced.

Hashim<sup>12</sup> reported the beneficial effects of a medium chain triglyceride diet in a patient with chyluria and chylothorax secondary to

filariasis. This synthetic triglyceride preparation contains only fatty acids with chain lengths shorter than laurate (C12:0). These shorter chain fatty acids pass directly into the portal venous system and are not found in thoracic duct lymph. This is in contrast to longer chain length fatty acids, both saturated and unsaturated, which are esterified in the intestinal mucosa and transported almost exclusively through the lymphatics. The ingestion of long chain fatty acids increases lymph flow two to three fold. In 1964, Holt<sup>13</sup> reported the results of treatment of a two-year-old child with intestinal lymphangiectasia with a medium chain triglyceride diet. Again, the child became symptom free and the serum proteins and steatorrhea responded dramatically. Challenge with long chain triglycerides reproduced the symptom complex. This medium chain triglyceride formula is now commercially available as Portagen (R) and constitutes the basis for the management of choice for patients with intestinal lymphangiectasia.

It should be emphasized, however, that such therapy is symptomatic and should not be utilized as the exclusive therapeutic regimen in patients with the exudative enteropathy syndrome with an etiology for which specific therapy is available. Optimally, the diagnosis of intestinal lymphangiectasia should be based on histopathologic evidence of dilated gastrointestinal lymphatics, the presence of exudative enteropathy, and lymphangiographic evidence of congenital malformations of the lymphatic system concurrent with the exclusion of such etiologies for lymph stasis as constrictive pericarditis.

Mistilis and Skyring,<sup>24</sup> in an elaborate preoperative and postoperative study of an 18-year-old boy with partial lymphatic obstruction at the level of the diaphragm associated with intestinal lymphangiectasia, hypoproteinemia, hypocalcemia, edema, and tetany reported a more direct therapeutic approach. A lymph-venous anastomosis was accomplished through a side-to-end anastomosis of a dilated lymphatic channel to the right long saphenous vein. Postoperatively, on a normal diet, the patient had relief of steatorrhea, hypocalcemia, edema, and tetany. Curiously, not only was the hypoproteinemia not relieved by surgery, but the addition of die-



tary fat restriction postoperatively was also ineffective in correcting the hypoalbuminemia. These authors suggest consideration of this surgical approach as superior to lifetime dietary management in selected patients with intestinal lymphangiectasia.

ADDITIONAL SYNDROMES

Although retrospective study is not possible, data available suggest that protein loss in exudative enteropathy may offer an explanation in selected instances for a variety of earlier metabolic observations. Not only does tetany occur frequently in exudative enteropathy, particularly in children, but it may constitute the chief clinical manifestation of the disease. Mistilis and Skyring<sup>24</sup> reported a patient with severe hypocalcemia and tetany associated with high fecal calcium excretion and gastrointestinal protein loss. Hypocalcemia in conjunction with steatorrhea should suggest the possibility of exudative enteropathy.

The hypocupremia, hypoproteinemia, and edema which have been reported in association with nutritional anemia may on occasion be explained on the basis of intestinal loss of ceruloplasmin and albumin.<sup>23</sup> It would appear intestinal protein loss may be the result of iron deficiency<sup>25, 44</sup> and may be associated with the loss of erythrocytes, transferrin, iron, ceruloplasmin, and copper into the gastrointestinal tract.

Studies of the nephrotic syndrome in past years have, on occasion, demonstrated protein "catabolism" in excess of urinary loss. This discrepancy may be accounted for by intestinal loss of protein in certain instances.<sup>22</sup>

SUMMARY

The exudative enteropathy syndrome is reviewed. Differential diagnostic considerations are presented in tabular form and current diagnostic tests are reviewed. The new clinical entity, intestinal lymphangiectasia, is discussed and current therapeutic concepts presented. □

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# Gastrointestinal Hormones

LURA A. HARRISON, Ph.D.  
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*In the past few years both the biochemical structure and the physiological role of gastrointestinal hormones has been established. These hormones play a role in gastrointestinal diseases.*

A FIELD OF scientific inquiry may lie dormant for decades before new techniques and new minds become available to rejuvenate the sleeping giant. Gastrointestinal endocrinology has been a case in point. By 1906 Starling and Edkins had provided definitive evidence for the existence of two new humoral agents, secretin and gastrin.<sup>4</sup> Unfortunately, more than 50 years elapsed before the chemical structure and physiological role of these hormones could be appreciated.

The modern era of gastrointestinal hormone research did not commence until 1964 when the structure of gastrin was announced.<sup>5</sup> Elucidation of the chemical structure of other hormones has followed in rapid succession. The complex feedbacks between the hormones, their action on gastrointestinal

organ functions, their immunology and their roles in disease have been investigated. Indeed, this dormant field has sprung to life, and today is one of the "hottest" areas of gastrointestinal research. Our brief review is intended to bring events up to date without neglecting historical perspective.

Why should a gastroenterologist, an internist, a general surgeon or a general practitioner be concerned about gastrin, secretin and other hormones of the gut? The reason is obvious. Gastrointestinal diseases are especially common in our society and we are unaware of the causes of the major disease entities we treat. There can be little doubt that gastrin is involved in the Zollinger-Ellison syndrome, and it is likely that gastrin and secretin are also involved in peptic ulcer disease. Without pushing speculation to extremes, the gastrointestinal hormones will likely be incriminated in pancreatitis, biliary tract disease, gastritis and diarrheal disease.

## GASTRIN

In 1905 Edkins reported that an extract of the mucosa of the antrum of the stomach caused an increase in gastric secretion of acid when the extract was injected into the circulation of anesthetized cats.<sup>4</sup> Because of the difficulty of reproducing Edkin's results, considerable skepticism was accorded his conclusion that the antral mucosa contained a hormone which Edkins called "gastrin."

In 1919 Popielski showed that histamine markedly increased gastric secretion of acid,

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and that histamine was present in the mucosa of the stomach.<sup>4</sup> Ivy was unable to extract material from the antrum of the stomach that did not contain histamine, despite elaborate extraction procedures. For these reasons, the existence of gastrin was generally doubted during the first 35 years following its discovery.

In 1942 Komarov used trichloroacetic acid to extract a histamine-free fraction from the antral mucosa; this material, when injected intravenously into dogs or cats, caused increased secretion of acid and water from the stomach, and the response was not blocked by atropine.<sup>4</sup> Komarov had resurrected gastrin. In 1959 Gregory and Tracy produced a highly purified extract of the antral mucosa which was free of histamine, was a potent gastric secretagogue and was evidently a polypeptide.<sup>4</sup>

The complete amino acid structure of the gastrin molecule was elucidated by Gregory and Tracy in 1965.<sup>5</sup> The hormone consists of 17 amino acids. It was subsequently shown that the entire range of physiological activities displayed by the natural gastrin molecule were also possessed by the C-terminal 4 amino acid residue of the molecule. The following actions have been attributed to the C-terminal tetrapeptide, which is commercially available:<sup>7</sup> (1) strong stimulation of gastric acid secretion; (2) moderate increase in gastric motility; (3) strong stimulation of pancreatic enzyme release; (4) weak stimulation of the production of pepsin by the stomach; (5) mild accentuation of biliary flow; (6) mild contraction of the gall bladder; and (7) mild increase in pancreatic secretion of bicarbonate and water.

Gastrin release from the antrum is mediated by direct cholinergic nervous excitation. Atropine, therefore, blocks the release but not the action of gastrin. Topical application of certain alcohols, amino acids and organic acids to the antral mucosa also elicits gastrin release. Elaboration of gastrin is halted by acidification of the antral mucosa. Therefore, hydrochloric acid acts as an inhibitor of its own production.

Several recent findings involving the hormone gastrin have important clinical applications. The synthetic gastrin-like peptide

(pentagastrin) has been found useful in stimulating high rates of acid secretion in man. This compound will most likely replace histamine as a stimulant for acid production in clinical evaluations of gastric secretory capacity. Anderson and Grossman disclosed that the vagally innervated antrum, shielded from acid by exclusion from the alimentary tract, releases gastrin.<sup>1</sup> Thus, surgical isolation of a portion of the antrum can result in hypersecretion of the oxyntic glands in response to uncontrolled production of gastrin. These findings confirmed Dragstedt's earlier reports on the unacidified antrum.

McGuigan has focused on developing antibodies with specificity for the gastrin molecule.<sup>11</sup> His work may ultimately produce a technique useful in measuring tissue and body fluid levels of gastrin in physiological and pathological states in man. Cooke has used the antibody technique to measure gastrin levels in normal individuals and in patients with duodenal ulcers. Although gastrin levels were found to be generally elevated in the group of ulcer patients, there was a considerable overlap between the normal and diseased groups.

Gregory and his collaborators were the first to demonstrate the presence of gastrin-like material from a pancreatic tumor in a patient with Zollinger-Ellison syndrome.<sup>6</sup> This disease process involves severe peptic ulceration and continuous hypersecretion of the stomach associated with a pancreatic tumor of non-beta-cell type.

#### SECRETIN

It is somewhat ironical that secretin should have been the first hormone whose existence was definitively proved, and yet the last hormone whose chemical structure has been identified. In 1902 Ernest Starling performed an experiment which clearly demonstrated the existence of secretin.<sup>4</sup> He instilled dilute hydrochloric acid into a loop of small intestine in the dog and thereby caused the pancreas to secrete copiously. Denervation of the intestinal loop failed to prevent the pancreas from secreting when acid was instilled into the intestine. Furthermore, Starling showed that an extract of intestinal mucosa, when injected into the circulation, caused the pancreas to secrete.



From these experiments Starling concluded that the presence of acid in the gut stimulated the pancreas to secrete by way of a humoral pathway. He termed the chemical in the intestinal mucosa "secretin." A few years later when Edkins had reported on the discovery of gastrin, Starling gave the name "hormone" to this type of blood-born chemical which is elaborated in one organ and acts at a distant site. The experiments of Starling set two standards for the proof of the existence of a gastrointestinal hormone: (1) the physiological process had to take place despite interruption of nervous pathways, and (2) the physiological process had to be initiated by injection of the proposed hormone into the circulation.

Subsequent investigators confirmed the inferences of Starling, despite some early skepticism about his results.<sup>4</sup> It was shown that intravenous injection of dilute hydrochloric acid alone had no effect on pancreatic secretion, thereby underscoring the necessity for acid to interact with the mucosa of the small intestine. It was also found in cross circulation experiments, after instillation of acid into the duodenum, that pancreatic venous blood contained a chemical which stimulated pancreatic secretion in a second animal. Other workers transplanted the pancreas or the duodenum from one site to another site of an experimental animal, thereby guaranteeing denervation; in these experiments it was shown that acid in the transplanted gut loop caused secretion from

a transplanted pancreas.

A separate line of investigation focused on extracting and purifying secretin from intestinal mucosa. Mellanby and others showed that the highest tissue concentration of secretin was localized in the upper two-thirds of the small intestine, though a little secretin could be extracted from the mucosa of the rest of the gastrointestinal tract.<sup>4</sup> By 1959 Jorpes and Mutt had managed to extract and purify a material containing secretin which provoked threshold stimulation of the pancreas in doses as small as 0.3 micrograms.<sup>10</sup> This material has served as the secretin standard to the present.

Most of the physiological actions of secretin were described before the modern era of gastrointestinal endocrinology.<sup>4</sup> Secretin is known to stimulate secretion of the pancreas, in particular to induce elaboration of water and electrolytes from the organ. As secretin causes increased secretion of juice from the pancreas, the bicarbonate concentration rises in the secretion from about 50 to 140 milliequivalents per liter. Pancreatic juice under maximal stimulation by secretin contains the highest concentration of bicarbonate of any body fluid. As the rate of pancreatic secretion increases, the concentration of chloride in the juice declines from about 100 to 30 milliequivalents per liter. In other words, the concentrations of chloride and bicarbonate are reciprocally related. Secretin appears to have no effect on the concentrations of cations in pancreatic juice. Secretin also has little or no effect on the elaboration of pancreatic enzymes. It is believed that the site of action of secretin is on the epithelial cells which line the ducts of the pancreas. These duct cells contain the enzyme carbonic anhydrase in large concentrations. This enzyme is responsible for accelerating the conversion of water and CO<sub>2</sub> into bicarbonate. Secretin also stimulates the liver to secrete bile poor in bile salts but high in bicarbonate concentration. Secretin is not, however, a potent stimulus of hepatic secretion. Secretin also inhibits the gastric secretory response to gastrin. Johnson and Grossman have concluded that secretin is the only enterogastrone released by acid in the duodenum.<sup>9</sup> Recent evidence suggests that stimulation of pepsin secretion is another physiological action of secretin.

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Grossman has proposed that failure of the secretin-releasing mechanism in the duodenum may be responsible for proliferation of duodenal ulcers.<sup>7</sup> In his view acidification of the duodenum fails to trigger the secretin mechanism to stimulate pancreatic bicarbonate flow. It has been found that some patients with duodenal ulcers are capable of secreting sufficient bicarbonate to neutralize maximal gastric acid when administered exogenous secretin. Isenberg and Grossman have recently reported a single subcutaneous injection of secretin to be an easy and effective method for inducing pancreatic flow.<sup>8</sup>

Wormsley has suggested the use of secretin to detect pancreatic malfunction.<sup>13</sup> This technique consists of using the maximal bicarbonate response to a continuous intravenous infusion of secretin to detect impaired bicarbonate secretory capacity in patients with chronic pancreatitis.

#### CHOLECYSTOKININ-PANCREOZYMIN (CCK)

In 1928 Ivy and his colleagues proved the existence of a hormone which was elaborated from the small intestinal mucosa, especially by the instillation of fat into the gut.<sup>4</sup> The hormone was termed "cholecystokinin." Subsequent work showed that the hormone caused the gall bladder to contract slowly and the sphincter of Oddi to relax, thereby extruding bile into the small intestine.

In 1943 Harper and Raper working with extracts of the small intestinal mucosa found a humoral substance which acted on the acinar cells of the pancreas causing the organ to secrete a low volume enzyme-rich juice.<sup>4</sup> This hormone was termed "pancreozymin." As in the case of cholecystokinin, there was no inhibition of the action of pancreozymin by atropine. It is now known that these two hormones are the same substance, and for reasons of brevity will be referred to in the rest of this discussion as cholecystokinin (CCK), since this was the first form of the hormone to be described.<sup>10</sup>

Subsequent investigation by Harper and his collaborators showed that CCK caused degranulation of pancreatic acinar cells, suggesting a different site of action than that shown for secretin.<sup>4</sup>

Wang and Grossman showed that the most potent stimulant of release of CCK was peptone and amino acids, although fat and acid in the duodenum also caused elaboration of the hormone.<sup>4</sup> These investigators transplanted the pancreas to the mammary gland area of the dog and were able to stimulate the transplanted (and hence denervated) pancreas to secrete enzymes in response to placing food in the duodenum. In addition, they showed that amino acids *per se* injected into the circulation had no effect on the pancreas. More recent work from Grossman's laboratory had demonstrated that CCK inhibits gastrin-stimulated acid secretion.<sup>12</sup> Thus, it appears that the theoretical hormone "enterogastrone" is likely a combination of secretin and CCK.

Jorpes and Mutt identified the amino acid structure of CCK and found that the C-terminal pentapeptide sequence was identical to the last five amino acids of the gastrin molecule.<sup>10</sup>

Caerulein, a substance extracted from the skin of an Australian frog, possesses a C-terminal peptide sequence identical to that found in gastrin and CCK.<sup>3</sup> Administration of minute amounts of caerulein results in very strong gastrin-like and CCK-like responses. Caerulein is eight to sixteen times more potent than CCK in stimulating release of pancreatic enzymes and gall bladder contractions, and its latter action makes it a useful agent to terminate the Graham-Cole test.<sup>2</sup> Evidently the potency of these peptides, gastrin, CCK and caerulein, is greatly influenced by the arrangement of amino acids in the molecule far from the C-terminal end. The process of evolution has produced gastrointestinal hormones having much milder actions than the explosive responses associated with caerulein, such as hypotension and nausea.

#### SUMMARY

From work of the past five years new generalizations can be made about the gastrointestinal hormones. First, it appears that there are basically only two types of gastrointestinal hormone: (1) gastrin and chemically related hormones such as cholecystokinin and caerulein, and (2) secretin and chemically related hormones such as glucagon.



Second, gastrin and secretin tend to oppose one another in the gastrointestinal tract. Thus, in the stomach gastrin stimulates and secretin inhibits acid secretion and motility. In the upper small intestine the effects of gastrin lead to acidification and the effects of secretin to alkalinization of the gut.

What are the probable avenues of future discovery and application in gastrointestinal endocrinology? Research developments in the next few years are likely to bring us more information about the interaction of these hormones, not only in health but in illness. Peptic ulcer is still a disease of unknown etiology. The immunological approach to hormone identification may give us a better diagnostic aid in peptic ulcer disease. Use of new synthetic anti-hormone factors may lead to better control of hypersecretion.

The unraveling of some of the mystery of secretin and gastrin and their analogues should provide not only a simpler physiological picture but also a better therapeutic rationale in diseases of the upper gut.

## ACKNOWLEDGMENT

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## Tumor Clinic Proceedings

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University of Oklahoma Medical Center*

### CASE No. 27: Squamous Cell Carcinoma Metastatic to the Cervical Lymph Nodes

**PRESENTATION:** The patient is a 58-year-old white male farmer, who in September, 1969, noted the onset of swelling in the left side of his neck. He was initially treated with penicillin by his local physician. Because the swelling did not improve following

the treatment a biopsy of a lymph node from the left side of the neck was performed six weeks ago, which was reported as showing a poorly differentiated carcinoma. The neck continued to increase in size and he then noticed the onset of swelling in the right side until there was massive adenopathy on both sides. He was then admitted to the University Hospital. On examination he had massive bilateral cervical adenopathy with a well-healed scar on the left side of the neck. Examination of the cranial nerves showed no abnormality. There is a serous otitis media on the left side. On examination of the nasopharynx a tumor mass was seen behind the soft palate on the left side. This has been biopsied and was reported as poorly differentiated squamous cell carcinoma. The chest x-ray was negative and the rest of the physical examination did not show evidence of any other metastatic disease.

**DOCTOR CONDIT:** Doctor Greenfield, how would you manage this patient?

**DOCTOR GREENFIELD:** This patient presents problems in both the nasopharynx and the neck, and in view of some disagreement in the literature about the appropriate management of massive neck metastases like this, I thought it would be worthwhile to present this patient for discussion by the

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

\*Assistant Head, Cancer Section, Oklahoma Medical Research Foundation, 825 N.E. 13th Street, Oklahoma City, Oklahoma 73104.



radiotherapists. I feel that the primary should be treated by radiation therapy. The question is whether or not there can be adequate control by radiation therapy alone of the cervical metastases or whether a bilateral radical neck dissection would be the therapy of choice for the metastatic lesions.

DOCTOR CONDIT: I felt that the nodes in the left side of the neck were fixed and the ones on the right were still movable. Is that what you felt?

DOCTOR GREENFIELD: They were all reasonably well-fixed. I must confess that I could not tell that much difference in the two sides.

DOCTOR CONDIT: Doctor Bogardus, would you agree that the primary should be treated by irradiation, and what would you recommend for the cervical metastases?

DOCTOR BOGARDUS: This patient with a carcinoma of the nasopharynx should be treated, at least his primary lesion, with radiation therapy. Considering the massive involvement of the cervical nodes, I would wonder if he would be a good surgical candidate, under any circumstances. The highly undifferentiated nature of the tumor makes it reasonably unlikely that we are going to cure it with radiation therapy. We would plan to treat him to a relatively high dose, carrying him to 7,000 rads to the primary. The neck nodes we would try to carry to 5,000 rads if the surgeons want to attempt a bilateral neck dissection and, if not, we would carry the cervical area to 6,000 rads.

DOCTOR CONDIT: Doctor Greenfield, would you be interested in going back after the nodes later?

DOCTOR GREENFIELD: No, not really. We don't have any illusion about being able to do any more than palliate this case, and, of course, the current reviews suggest that radiation can, in many instances, accomplish pretty impressive resolutions of cervical metastatic disease. The review in *Cancer* (24: 1, 1969) would suggest that it is not beneficial to the patient to go back and do a node dissection at that time, but I wondered what others might think.

DOCTOR BOGARDUS: I think this comes back to the problem we often have spoken of at this tumor board. Surgery following radiation therapy should not be less aggressive than the surgery that would be neces-

sary without radiation therapy. The possibility of making an inoperable cancer operable by radiation therapy is really remote in most situations. I think, because of this man's extensive involvement, that he will probably never become a surgical candidate.

DOCTOR GREENFIELD: The main consideration we had was in terms of palliation because the lesions are becoming symptomatic.

DOCTOR BOGARDUS: I'm sure he would be well palliated. The tumor is highly undifferentiated, which means in all probability it will respond quite well to radiation. The nodes should shrink dramatically, but the chance of his being cured is small. I think he will be well palliated.

DOCTOR CONDIT: Doctor Hartsuck, do you have anything else to add?

DOCTOR HARTSUCK: This case brings up one interesting point. Many people think of head and neck tumors as usually being quite localized and seldom metastasizing to other parts of the body, but as you treat these people more intensively and palliate them, particularly with surgical control of the local disease, you see more and more systemic disease arising elsewhere. I think this man probably has systemic disease since he has bilateral neck involvement that is extensive. Certainly in this type of lesion I would consider radiation therapy and chemotherapy for him, and I would not favor surgery.

DOCTOR BOGARDUS: One other point to be made is the method of making the original diagnosis. Neck nodes should not be biopsied if the primary is available because it obviously makes a radical neck dissection much less likely to cure the patient.

DOCTOR GREENFIELD: Yes, that's true.

DOCTOR CONDIT: As far as chemotherapy is concerned, Methotrexate is really the only drug that can do anything worthwhile with squamous cell carcinoma. There are a number of dosage regimens combining Methotrexate with radiation therapy.

DOCTOR BOGARDUS: If you would like to treat him with chemotherapy prior to radiation therapy, this would be fine. It would help us if the tumor responded to bring down the sheer bulk of it.

DOCTOR CONDIT: We can treat him for



## *Tumor Clinic* / BOTTOMLEY

a month with Methotrexate, and then you can treat him with radiation therapy. Although this obviously will not be likely to eradicate such extensive disease, it should give him the longest period of palliation.

**FINAL DIAGNOSIS:** Poorly differentiated squamous cell carcinoma of the naso-

pharynx with massive bilateral cervical lymph node metastases.

**TUMOR CLINIC RECOMMENDATIONS:** It is felt that the patient is not curable by a surgical approach. The best palliation would be to treat the patient initially with Methotrexate to be followed by radiation therapy to both the primary tumor in the nasopharynx and the cervical metastases.

**Announcing**  
**ANNUAL SPRING SYMPOSIA**  
**IN**  
**GYNECOLOGY AND OBSTETRICS**  
**April 30th, May 1st and 2nd, 1970**  
**ARROWHEAD LODGE — LAKE EUFAULA**

The Department of Gynecology and Obstetrics  
The Office of Postgraduate Education  
University of Oklahoma Medical Center  
The Oklahoma State Department of Health  
Hillcrest and St. John's Hospitals  
Tulsa, Oklahoma

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Associate Professor of Obstetrics and Gynecology  
University of Michigan Medical School  
Ann Arbor, Michigan

SEYMOUR L. ROMNEY, M.D.  
Professor and Chairman of Gynecology and  
Obstetrics  
Albert Einstein College of Medicine  
Bronx, New York

WILLIAM F. MENGERT, M.D.  
Professor of Obstetrics and Gynecology  
University of Illinois School of Medicine  
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**INFECTIOUS DISEASE IN**  
**OBSTETRICS AND GYNECOLOGY**  
**ASSESSMENT OF FETAL STATUS IN UTERO**  
**TWO AND ONE-HALF DAYS OF LECTURE AND ROUND TABLE DISCUSSION**  
**SMALL GROUP INFORMAL SEMINARS**

The SPRING SYMPOSIA this year will be concerned primarily with infectious complications in obstetric and gynecologic practice. Prevention, diagnosis and optimum medical and surgical treatment will be discussed in detail. One-half day will be devoted to advances in the assessment of fetal status in utero, including cytologic and chemical analysis of amniotic fluid, fetal electrocardiography and fetal scalp vein sampling. The informal setting of Arrowhead Lodge will contribute to close association between faculty and registrants, giving ample opportunity for small group discussion and individual consultation.

For further information write: Office of Postgraduate Education, University of Oklahoma Medical Center, 800 Northeast 13th Street, Oklahoma City, Oklahoma 73104.



## *Regional Medical Programs and Medical Care in Rural Oklahoma*

DALE GROOM, M.D.\*

*As medicine advances scientifically  
comparable advances are required  
in systems of medical practice.  
Particularly "beyond the city limits,"  
new needs require new answers and  
a rethinking of some of our  
time-honored methods of medical care.*

**R**EGIONAL MEDICAL PROGRAMS differ from all other federally supported projects in several ways, perhaps the most distinctive of which is the feature of control by local governing councils. Leading citizens from throughout Oklahoma serve in rotation on the ORMP Advisory Group whose job it is to determine what are the major health care needs of our particular state, which of course may differ greatly from those of Massachusetts, Oregon or Florida. In effect, federal dollars are turned back to the states or regions to spend as best serves their special needs. It is this nonpolitical type of control, representative of minority groups as well as of industry, the professions and government, which is unique to RMP and which is responsible in large part for its rapid growth

and achievements, as well as its acceptance and support by organized medicine.

Understandably then, if this system of local control works, a sizable proportion of RMP funds in Oklahoma should go toward solving the urgent health care problems of rural areas of our state. Assuredly many other states also suffer from an inordinate concentration of physicians in the urban areas but such problems are accentuated in the vastness of Oklahoma with its relatively low physician-to-population ratio. Even more significant than the actuality is the trend: Clearly, fewer and fewer graduates of U. S. medical schools are going into general practice, while some of those who did are going back into residency training. Thus more non-urban communities, though they may be growing in population or economy, are finding themselves critically short of medical resources and confronted with the stark prospect of a further decline. Certainly there are very real reasons other than geographic ones for this migration of health personnel away from areas of greatest need, not the least of which is the increasing complexity of medicine itself which depends more and more upon a team effort for the delivery of truly modern care for more than trivial illnesses. Developments in transportation and communication, as well as in the scientific basis of medical practice, call for new solutions for problems which no longer can be left simply to the law of supply and demand. What is Oklahoma's Regional Med-

\*Director, Oklahoma Regional Medical Program, 828 N.E. 15th Street, Oklahoma City, Oklahoma 73104. Associate Dean for Continuing Education, University of Oklahoma Medical Center.



ical Program doing to remedy what virtually all agree is a distribution problem of health services and facilities, at least so far as the rural populace is concerned?

First, the theater of operations of ORMP is not any single institution or metropolitan area but rather the entire "region" which, in our case, is the State of Oklahoma. Whereas in past years medical schools and research centers were the chief recipients of funds distributed by the National Institutes of Health, the approximately \$100 million for fiscal year 1970-71 which is divided among the fifty-five regions of the country is earmarked to serve people, not laboratories or institutions. True, that is not much with which to significantly alter the health care system of the entire nation. But it is a start, a basic change in the philosophy of allocation of our health funds that sets a precedent. Oklahoma's share of a little over one million dollars for the next fiscal year (only a third of that for which we applied but a proportion in keeping with our population, if not our actual needs) is sufficient to at least get underway our nine locally conceived projects. Some counties have had to content themselves with little more than demonstration projects in place of the more extensive services proposed in the planning phases of ORMP, and a few counties have necessarily been dropped altogether. But demonstrations

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*Dale Groom, M.D., graduated from the Medical College of Virginia in 1943. He is now certified by the American Board of Internal Medicine and the Subspecialty Board of Cardiovascular Disease and is Associate Dean for Continuing Education and Professor of Medicine at the University of Oklahoma School of Medicine. He is a member of the American College of Physicians, the American College of Cardiology and currently is president of the Mayo Alumni Association.*

*In addition, Doctor Groom is a member of the American Medical Association's Council on Scientific Assembly, its Committee on Continuing Medical Education, and AMA Committee on Continuing Professional Education.*

are better than no projects at all. And especially gratifying to all of us are the numerous instances in which local support has been rallied in communities and hospitals by a little pump priming, even to the extent of exceeding the scope of the services initially proposed.

Contributions of specific projects of ORMP to rural medical care bear mention. That bugaboo of professional isolation in remote areas is being alleviated in part by new lines of communication. For example, there is the almost instant access to several medical libraries which are being augmented and geared for information services to all health professionals. Leased telephone lines are being put into service on a trial basis in the Enid area for constant communication with outlying hospitals, for conferences, case discussions, brief lectures by dial access. Our largest project, that devoted to acute coronary care, constitutes itself a decentralization of specialized services whereby selected large hospitals provide continuous monitoring as well as consultation by leased lines connecting them with hospitals in surrounding smaller communities. Other specialized facilities such as those required for modern treatment of emphysema and other pulmonary disorders are being set up and manned in strategically located referral centers by RMP funds. The mammography project is "taking on the road" a new x-ray technique for diagnosis of cancer of the breast, while a concerted effort in prostatic cancer is being launched in several areas of Oklahoma. What originally was started as a central tumor registry for Tulsa is being extended to make its computer facilities available to outlying hospitals. Along with these are the educational contributions including courses and workshops on nutrition, on the treatment of diabetes, cancer detection, advances in treatment of patients with acute myocardial infarction and pulmonary insufficiency. All these activities arise or extend outside the Medical Center in Oklahoma City. They are designed to both improve and make more uniform the standards of medical care throughout the state.

Obviously there are no simple answers . . . certainly no single solution . . . to all our problems of bringing better health care to rural areas. National acclaim is being ac-



corded The University of Oklahoma Medical Center for its leadership and innovations in meeting this challenge in our own state. The Oklahoma State Medical Association has organized a new council of lay leaders and physicians "to study and recommend solutions to the problems of medical care in rural Oklahoma." The issues directly concern far wider circles than the health professions

and cannot be left to random solution any more than can cases of meningitis or mitral stenosis. Whatever answers are evolved must be consistent with the technology and needs of the last third of the twentieth century, not the first. That is going to require some rethinking of the problems . . . together . . . and surely all the vision we can muster. □

## *News of Note*

**Fact that fees for physicians services** represent only a small portion of Medicaid expenditures (11 percent nationally) is poorly understood by the public. In Texas, where a projected \$17 million deficit in state Medicaid expense was averted by action of the Legislature last month, a Fort Worth Physician poignantly got the message across: **If all participating physicians provided their services without charge, this deficit would be reduced only from \$17 million to \$15 million.**

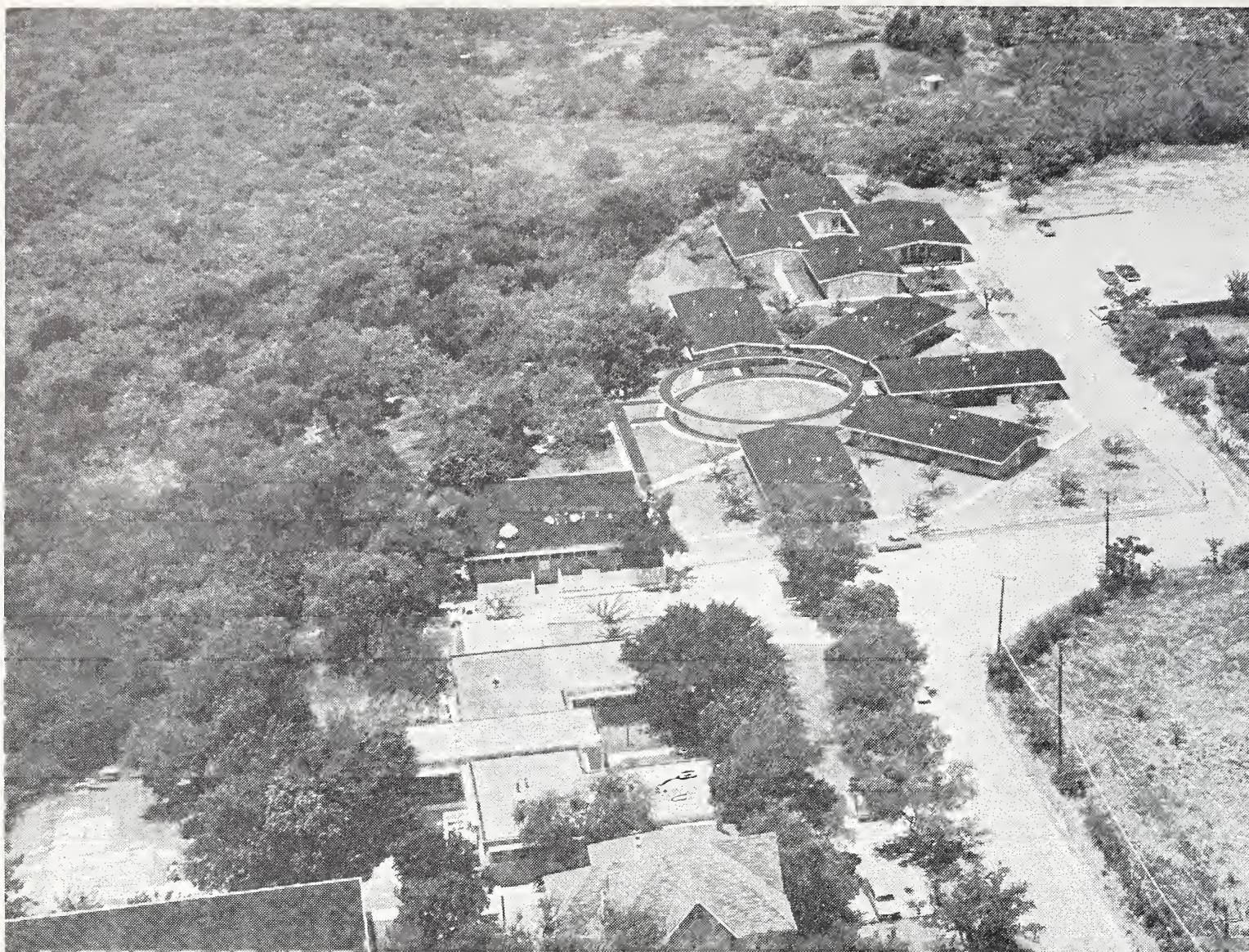
**Latest HEW harassment takes the form of a regulation** that must be implemented by all state Medicaid programs. Published in the February 28th issue of the Federal Register, the new regulation requires that all Title XIX programs establish "a basis for verifying with recipients whether services billed by providers were actually received. Such basis must be by random sample of patients for each provider who is paid significant amounts under the program and for groups

of providers, none of whom receive a significant amount."

**HEW is considering paying the expenses of medical students** in return for services later in areas where a physician shortage exists. They will pay the student's way through school in return for one or two years of service in the area designated by HEW.

**IRS has changed its position concerning capital gain** when an M.D., lawyer or other professional joins a firm as a new partner. Until recently, the IRS had held that the newcomer was buying a share in the firm's future earnings, thus what he paid was taxable as ordinary income to the original partners. IRS refused to recognize any part of the payment as being for goodwill. Now, it concedes partial transfer of goodwill may be involved and that the payment for such goodwill is a capital gain for the seller. However, IRS says it will carefully scrutinize such transactions to be sure that goodwill actually exists. □





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# ANNOUNCING THE ANNUAL MEETING OKLAHOMA STATE MEDICAL ASSOCIATION

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# The Professional Corporation

## Windfall or Pratfall?

Now that a doctor or lawyer and most professional men, for that matter, may be able to conduct his practice as a corporation, the tax planning opportunities are significant. For example, he may adopt a pension or profit-sharing plan and take advantage of the liberal tax deductions available to corporations. In addition, contributions accumulate tax-deferred and, at retirement, may be paid out as periodic income or recovered in a lump sum and treated in part as long term capital gains.

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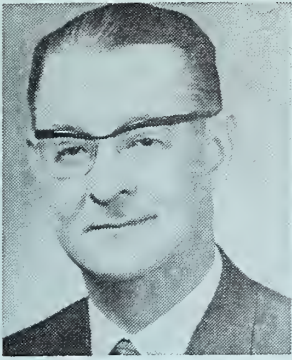
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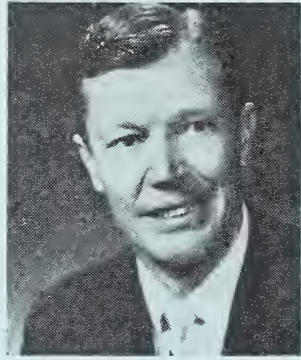
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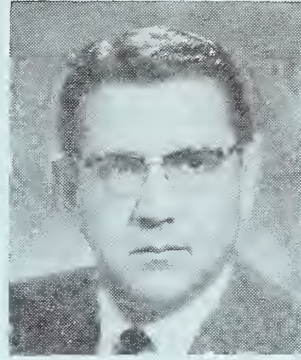
# Oklahoma State Medical Association



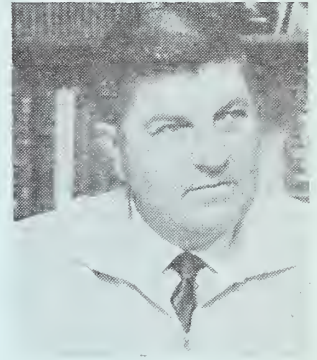
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# Digest of Events

## HOTEL ACCOMMODATIONS

Headquarters for the sixty-fourth annual meeting will be the Skirvin Hotel, Oklahoma City, where a large block of rooms has been reserved for members of the Oklahoma State Medical Association. Physicians are requested to make their own reservations directly by writing to the Skirvin Hotel, Broadway at Park Avenue, Oklahoma City, Oklahoma 73124—providing the hotel with dates and times of arrival and departure.

All annual meeting business, scientific, exhibit and social activities are scheduled for either the Skirvin or Skirvin Tower Hotel.

## REGISTRATION

Registration will open Thursday, May 14th at 11:00 a.m. on the second floor of the hotel, at the entrance to the exhibit area. The general registration desk will also be open from 7:30 a.m. until 5:00 p.m. on Friday and Saturday, May 15th and 16th.

Members of the House of Delegates (including the Board of Trustees and Officers) may register at the general registration desk beginning at 11:00 a.m. on Thursday. They will receive special badges upon presentation of their credentials cards. Registration for delegates will reopen at 6:00 p.m. on Thursday evening, immediately preceding the opening session of the house. Portfolios containing all business items to be considered will be distributed at the time of registration.

A registration fee of \$5 will be charged all physicians attending this year's annual meeting. The fee will help underwrite two and one-half days of scientific programs, the picnic luncheons on Friday and Saturday noon and the "attitude adjustment" (cocktail) party Friday evening.

## BOARD OF TRUSTEES

The OSMA Board of Trustees will conduct its annual meeting Thursday morning, May 14th. The meeting will convene in the Skirvin Hotel's Crystal Room at 9:00 a.m.

## HOUSE OF DELEGATES

The OSMA House of Delegates will con-

duct two sessions during the 1970 annual meeting.

The open session will be held on the evening of Thursday, May 14th, and the closing session on Saturday morning, May 16th. Both sessions will convene in the hotel's convention center.

The opening session will begin at 7:00 p.m. on Thursday evening and will feature the appearance of special guests, introduction of reports and resolutions, nominations of OSMA general officers, AMA delegates and alternates and candidates for the Board of Trustees.

All items of business introduced during the opening session will be sent to reference committee meetings Friday morning at 9:00 a.m. in the Skirvin Tower Hotel's Park Avenue Suite. Open hearings on the reports and resolutions will be conducted by four committees, and all members of the Oklahoma State Medical Association are invited to attend and to participate in the discussions.

The reference committees will prepare reports containing recommendations for presentation at the House of Delegates at the closing session which commences at 9:00 a.m. on Saturday morning.

In addition, elections will be held during the closing session.

At the conclusion of the Friday reference committee meetings and the Saturday morning House of Delegates session, all delegates are invited to attend the "picnic luncheons" to be held on the 14th floor of the Skirvin Hotel.

The Oklahoma State Medical Assistants Society will provide coffee for the House of Delegates meeting Saturday morning.

## SCIENTIFIC SESSIONS

The scientific portion of the annual meeting will be held in the hotel's convention center Thursday afternoon, May 14th, and all day Friday and Saturday, May 15th and 16th.

Eleven special-interest medical societies are co-sponsoring section meetings in their respective fields. All section meetings, however, are open to the entire association membership.



The scientific portion of the 1970 annual meeting will feature six "system sessions" of general interest to all Oklahoma physicians. Each session is built around a body system or an area of medical interest. The purpose behind the system sessions will be to furnish all persons in attendance with information that is new and useable when working with the medical difficulties in that particular system.

Each system session will be of interest to several medical specialties. They will begin with four or five short formal presentations. These will be followed by local physicians who will interrogate the speakers. Audience participation is invited.

A detailed scientific program appears on pages 175 to 177 of this journal.

### SYSTEM SESSIONS

The following is a brief explanation of each system session, listing the specialties involved and the time of the meeting:

**Genitourinary-endocrine:** This session will be held from 1:00 until 3:00 p.m. Thursday afternoon and will involve the interest of Radiology, OB/GYN, Surgery, Internal Medicine, Pathology and General Practice.

**Neuro-sciences:** This session will be held Thursday afternoon from 3:00 until 5:00 p.m. and will involve Pediatrics, Dermatology, Otolaryngology, and Neurological surgery.

**Respiratory:** This session will be held Friday morning from 10:00 a.m. until noon and will be of interest to Pediatrics, Radiology, Pathology, ENT, Internal Medicine and General Practice.

**Cardiovascular:** This session will be held Friday afternoon from 1:30 until 3:00 p.m. and will be of interest to Internal Medicine, Surgery, Radiology, General Practice and Pediatrics.

**Gastrointestinal:** This session will be held Friday afternoon from 3:30 until 5:00 p.m. and will be of interest to Surgery, Internal Medicine, Pediatrics, Radiology and General Practice.

**Transplantation and Implantation:** This session will be held Saturday morning from 10:00 a.m. until noon and will be of interest to Plastic Surgery, Orthopedics, Internal Medicine, ENT and General Practice.

### GENERAL INTEREST PROGRAMS

In addition to the system sessions there will be four general interest programs during the meeting.

A session of general interest will be held Friday afternoon from 12:30 until 1:15 p.m. on the subject of Immunology. John S. Thompson, M.D., Iowa City, Iowa, will present the special paper. He is Chief, Medical Service, Veterans Administration Hospital, Iowa City.

Saturday afternoon will be devoted to three general interest presentations. From 1:00 until 2:00 p.m. James L. Mathis, M.D., Rutgers University, will present a paper on sex education. He will be followed at 2:00 p.m. by James H. Sammons, M.D., Chairman, American Medical Political Action Committee, speaking on Universal Health Insurance. From 3:30 until 5:00 p.m. there will be a general session on malpractice which will be highlighted by a mock trial.

### PICNIC LUNCHEONS

The popular picnic luncheons will return again this year on Friday and Saturday at noon. The picnics will be held on the 14th floor of the Skirvin Hotel. The OSMA is co-sponsoring both picnics, the one Friday with Oklahoma Blue Shield and the one on Saturday with the Insurance Company of North America.

Corned beef and pastrami sandwiches, beer, soft drinks and assorted relishes and side dishes will be served in an informal atmosphere.

### ATTITUDE ADJUSTMENT PARTY

Cocktails and an assortment of hot hors d'oeuvres will be the fare at the OSMA Attitude Adjustment Party Friday evening in the Skirvin Tower Hotel's Persian Room. Music will be provided by the Floyd "Red" Rice Combo. The party will last from 6:00 until 7:30 p.m., and this will allow everyone time to dine at one of Oklahoma City's fine restaurants. All registrants are invited at no extra charge.

### PRESIDENT'S INAUGURAL DINNER-DANCE

On Saturday night, May 16th, the annual



President's Inaugural Dinner-Dance will be held in the Persian Room of the Skirvin Tower Hotel at 7:00 p.m. It will be preceded by a poolside cocktail party, 6:00 p.m. at the Skirvin Hotel's Sun Suite.

Ed L. Calhoon, M.D., Beaver, will succeed Hillard E. Denyer, M.D., Bartlesville, as President of the Oklahoma State Medical Association. The inaugural ceremony will be conducted at the conclusion of the banquet.



STAFFORD

Keynote speaker for the banquet will be one of Oklahoma's astronauts, Colonel Tom Stafford of Weatherford. He has been in space three times, has completed five rendezvous and logged 290 hours and 15 minutes of space flight. In May, 1969, he was commander of Apollo 10 and made the first comprehensive lunar orbital flight.

Following the inauguration and the keynote address, physicians and their wives will be invited to dance 'till midnight to the music of Al Good and his orchestra.

The banquet menu will feature a gourmet dinner with wine. During the dance, setups may be obtained from the hotel. B.Y.O.L.

Social hour, gourmet dinner with wine, outstanding entertainment, dancing—all yours for the below cost price of only \$10 per person. Order your tickets in advance from the OSMA, 601 N.W. Expressway, Oklahoma City, 73118.

### TENNIS AND GOLF TOURNAMENTS

The annual tennis tournament will be played at the new Memorial Tennis Center, Will Rogers Park, Northwest 34th and Portland, Oklahoma City, at high noon on May 14th and 15th. There is no entry fee. Balls will be available for purchase at the courts. Events include men's singles and doubles, and for the first time, women's singles and

doubles, spouses only being allowed to play. There will be consolation brackets played in each event and trophies will be awarded. Send entries to Farris W. Coggans, M.D., 1100 North Dewey, Oklahoma City, or enter at the registration desk during the OSMA annual meeting. Winners will be awarded at Saturday night's dinner-dance.

The annual OSMA golf tournament is scheduled to be held all day Friday, May 15th. Tee off time will be 9:00 a.m. (Location of the tournament will be announced at a later date.) Trophies will be awarded to winners of various classes, and will be announced at the inaugural dinner on Saturday evening. Arthur E. Schmidt, M.D., Oklahoma City, is chairman of the tournament.

### WOMAN'S AUXILIARY

The woman's auxiliary to the OSMA will meet on May 14th to 16th in the Skirvin Hotel. A full program of events is scheduled on pages 184 to 187 of this journal.

### PAST-PRESIDENTS' BREAKFAST

The traditional breakfast for former presidents of the OSMA will be held at 7:30 a.m. on Saturday, May 16th, in the Skirvin Hotel's Executive Suite.

### EXHIBITS

Primary financial support for the annual meeting will be provided by approximately 65 technical exhibitors and 15 scientific and institutional exhibits (see roster on page 179). The exhibit area is located in the Skirvin Convention Center on the second floor of the hotel. It will be open from 12:00 p.m. until 5:00 p.m. on May 14th, and from 8:00 a.m. until 5:00 p.m. on May 15th and 16th.

### Annual Meeting Telephone Message Center

Attention: While you are attending the OSMA annual meeting in Oklahoma City, your emergency calls may be referred to

**232-5101**

A courtesy message center will be maintained by Southwestern Bell Telephone during the sixty-fourth annual meeting.



# SCIENTIFIC PROGRAM

All Meetings To Be Held On The Second Floor, Skirvin Hotel

## Thursday Afternoon, May 14th, 1970

### SECTION ON PEDIATRICS

**Jake Jones, Jr., M.D., Shawnee, Presiding**

1:00 p.m.-2:30 p.m. PEDIATRIC NEUROLOGY

Arnold P. Gold, M.D., Associate Professor of Clinical Neurology (Pediatrics),  
College of Physicians and Surgeons, Columbia University, *New York City*

### SECTION ON OTOLARYNGOLOGY

**W. David Stuart, M.D., Oklahoma City, Presiding**

1:00 p.m.-2:30 p.m. DIZZINESS—DIAGNOSIS AND MANAGEMENT

Brian F. McCabe, M.D., Professor and Head of Otolaryngology, University  
Hospital, *Iowa City, Iowa*

### SYSTEM SESSION—GENITOURINARY-ENDOCRINE

**L. O. Laughlin, M.D., Oklahoma City, Presiding**

1:00 p.m.-3:00 p.m. PANELISTS:

Radiology—Jerome F. Wiot, M.D., Professor and Director, Department of  
Radiology, Cincinnati General Hospital, *Cincinnati, Ohio*; Obstetrics-Gynecology  
—Charles D. Christian, M.D., Professor and Head, Department of OB-GYN,  
University of Arizona, *Tucson, Arizona*; Surgery—Gilbert S. Campbell, M.D.,  
Professor and Head, Department of Surgery, University of Arkansas School of  
Medicine, *Little Rock, Arkansas*; Internal Medicine—Robert L. Scott, M.D., *Tulsa*;  
Pathology—Paul Kimmelstiel, M.D., *Oklahoma City*; General Practice—Leonard  
R. Diehl, M.D., *Oklahoma City*.

Following Formal Presentations, Local Physicians Will Interrogate The Panel,  
Plus Audience Participation.

### SECTION ON OBSTETRICS AND GYNECOLOGY

**William F. Thomas, M.D., Tulsa, Presiding**

3:30 p.m.-5:00 p.m. PRECOCIOUS PUBERTY

Charles D. Christian, M.D., Professor and Head, Department of Obstetrics and  
Gynecology, University of Arizona, *Tucson, Arizona*.

### SECTION ON SURGERY

**Warren L. Felton, II, M.D., Oklahoma City, Presiding**

3:30 p.m.-5:00 p.m. PULMONARY EMBOLISM—SURGERY

Gilbert S. Campbell, M.D., Professor and Head, Department of Surgery, Uni-  
versity of Arkansas School of Medicine, *Little Rock, Arkansas*.

### SYSTEM SESSION—NEUROSCIENCES

**Ralph I. Druckman, M.D., Oklahoma City, Presiding**

3:00 p.m.-5:00 p.m. PANELISTS:

Pediatrics—Arnold P. Gold, M.D., Associate Professor of Clinical Neurology  
(Pediatrics), Columbia University, *New York City*; Dermatology—Dennis A.  
Weigand, M.D., *Oklahoma City*; Otolaryngology—Brian F. McCabe, M.D., Pro-  
fessor and Head of Otolaryngology, University Hospital, *Iowa City, Iowa*; Neu-  
rological Surgery—Robert G. Fisher, M.D., *Oklahoma City*.

Following Formal Presentations, Local Physicians Will Interrogate The Panel,  
Plus Audience Participation.

## Friday Morning, May 15th, 1970

### SECTION ON PATHOLOGY

**Willard Aronson, M.D., Oklahoma City, Presiding**

8:00 a.m.-9:30 a.m. RESPIRATORY PATHOLOGY

Charles B. Carrington, M.D., Department of Pathology, University of California  
Medical School, *San Diego, California*.



### **SECTION ON OTOLARYNGOLOGY**

**Donald R. Resler, M.D., Oklahoma City, Presiding**

8:00 a.m.-9:30 a.m. UNDIAGNOSED LUMP IN THE NECK—MANAGEMENT AND TREATMENT

Brian F. McCabe, M.D., Professor and Head of Otolaryngology, University Hospital, *Iowa City, Iowa*

### **SECTION ON OPHTHALMOLOGY**

**E. Norris Robertson, Jr., M.D., Oklahoma City, Presiding**

9:00 a.m.-12:00 a.m. SURGICAL TECHNIQUES

Albert N. Lemoine, M.D., Professor and Head, Department of Ophthalmology, University of Kansas, *Kansas City, Missouri*.

### **SYSTEM SESSION—RESPIRATORY**

**Stephen J. Adelson, M.D., Tulsa, Presiding**

10:00 a.m.-12:00 p.m. PANELISTS:

Pediatrics—Harris D. Riley, Jr., M.D., *Oklahoma City*; Radiology—Eugene C. Klatte, M.D., Chairman and Professor of Radiology, Vanderbilt University Medical School, *Nashville, Tennessee*; Pathology—Charles D. Carrington, M.D., Department of Pathology, University of California, *San Diego, California*; ENT—James B. Snow, Jr., M.D., *Oklahoma City*; Internal Medicine—Clarence A. Guenter, M.D., *Oklahoma City*.

Following Formal Presentations, Local Physicians Will Interrogate The Panel, Plus Audience Participation.

## **Friday Afternoon, May 15th, 1970**

### **SPECIAL LECTURE ON IMMUNOLOGY**

**Floyd F. Miller, M.D., Tulsa, Presiding**

12:30 p.m.-1:15 p.m. APPLICATION OF THE LESSONS OF TRANSPLANTATION IMMUNOLOGY TO CLINICAL MEDICINE

John S. Thompson, M.D., Chairman, Department of Internal Medicine, VA Hospital, *Iowa City, Iowa*.

### **SYSTEM SESSION—CARDIOVASCULAR**

**Robert D. Wuerflein, M.D., Oklahoma City, Presiding**

1:30 p.m.-3:00 p.m. PANELISTS:

Surgery—Gilbert S. Campbell, M.D., Professor and Head, Department of Surgery, University of Arkansas School of Medicine, *Little Rock, Arkansas*; Pediatrics—Webb M. Thompson, Jr., M.D., *Oklahoma City*; Radiology—Eugene C. Klatte, M.D., Chairman and Professor of Radiology, Vanderbilt University Medical School, *Nashville, Tennessee*; Internal Medicine—Ernest W. Hancock, M.D., Stanford University Medical School, *Palo Alto, California*.

Following Formal Presentations, Local Physicians Will Interrogate The Panel, Plus Audience Participation.

### **SYSTEM SESSION—GASTROINTESTINAL**

**J. William Hood, M.D., Oklahoma City, Presiding**

3:30 p.m.-5:00 p.m. PANELISTS:

Surgery—Gilbert S. Campbell, M.D., Professor and Head, Department of Surgery, University of Arkansas School of Medicine, *Little Rock, Arkansas*; Radiology—Jerome F. Wiot, M.D., Professor and Director, Department of Radiology, Cincinnati General Hospital, *Cincinnati, Ohio*; Internal Medicine—Turner E. Bynum, M.D., *Oklahoma City*; Pediatrics—Rainer Poley, M.D., *Oklahoma City*.

Following Formal Presentations, Local Physicians Will Interrogate The Panel, Plus Audience Participation.

## **Saturday Morning, May 16th, 1970**

### **SECTION ON PLASTIC SURGERY**

**Edward A. Shadid, M.D., Oklahoma City, Presiding**

8:00 a.m.-9:30 a.m. COSMETIC FACE-LIFT

Bromley S. Freeman, M.D., Clinical Professor of Surgery (Plastic), Baylor University, *Houston, Texas*.



### SECTION ON INTERNAL MEDICINE

**Floyd F. Miller, M.D., Tulsa, Presiding**

8:00 a.m.-9:30 a.m. (TOPIC TO BE ANNOUNCED)

John S. Thompson, M.D., Chairman, Department of Internal Medicine, VA Hospital, *Iowa City, Iowa.*

### SECTION ON ENT

**Byron W. Aycock, M.D., Lawton, Presiding**

8:00 a.m.-9:30 a.m. TRACHEOTOMY—INDICATION AND MANAGEMENT

William J. Preston, M.D., *Tulsa*

HOARSENESS

David O. Merifield, M.D., *Tulsa*

FACIAL FRACTURES—RECOGNITION AND EARLY MANAGEMENT

Kenneth A. Rogers, Jr., M.D., *Oklahoma City.*

### SECTION ON DERMATOLOGY

**O'Tar T. Norwood, M.D., Oklahoma City, Presiding**

10:00 a.m.-12:00 a.m. WHAT'S NEW IN DERMATOLOGY?

John M. Knox, M.D., Professor and Head of the Department of Dermatology, Baylor University, *Houston, Texas.*

CYROSURGERY OF SKIN CANCER

Wilfred E. Wooldridge, M.D., Visiting Lecturer at O.U. and Clinical Professor of Medicine (Dermatology), the University of Missouri, *Springfield, Missouri.*

DEVELOPMENTS IN DIAGNOSTIC TECHNIQUES

Dennis A. Weigand, M.D., *Oklahoma City.*

IMMUNOSUPPRESSIVES AND MALIGNANCY

Vincent P. Barranco, M.D., *Tulsa*

### SYSTEM SESSION—TRANSPLANTATION AND IMPLANTATION

**Edward A. Shadid, M.D., Oklahoma City, Presiding**

10:00 a.m.-12:00 p.m. PANELISTS:

Orthopedic Surgery—Carl D. Martz, M.D., Professor of Orthopedic Surgery, University of Indiana, *Indianapolis, Indiana*; Plastic Surgery—Bromley S. Freeman, M.D., Clinical Professor of Surgery (Plastic), Baylor University, *Houston, Texas*; Internal Medicine—John S. Thompson, M.D., Chairman, Department of Internal Medicine, VA Hospital, *Iowa City, Iowa*; ENT—Jack V. Hough, M.D., *Oklahoma City.*

Following Formal Presentations, Local Physicians Will Interrogate The Panel, Plus Audience Participation.

## Saturday Afternoon, May 16th, 1970

### GENERAL SESSION—SEX EDUCATION

**Arnold G. Nelson, M.D., Oklahoma City, Presiding**

1:00 p.m.-2:00 p.m. SEX EDUCATION

James L. Mathis, M.D., Associate Professor of Psychiatry, Rutgers Medical School, *New Brunswick, New Jersey.*

### GENERAL SESSION—MALPRACTICE

**R. Barton Carl, M.D., Oklahoma City, Presiding**

3:30 p.m.-5:00 p.m. MOCK TRIAL—PROFESSIONAL LIABILITY CASE

OSMA defense attorneys and physician members will present a courtroom scene illustrating the defendant doctor's legal errors which compromise successful defense of a malpractice lawsuit. Following the trial, the attorneys will emphasize points and doctrines of law brought out in the case, and there will be a question and answer period.

### GENERAL SESSION—UNIVERSAL HEALTH INSURANCE

**Hillard E. Denyer, M.D., Bartlesville, Presiding**

2:00 p.m.-3:00 p.m. UNIVERSAL HEALTH INSURANCE

Robert J. Myers, Chief Actuary, Social Security Administration, *Washington, D.C.*



# Entertainment Schedule

## PICNIC LUNCHEONS

Noon—May 15th and 16th—14th floor—Skirvin Hotel

Physicians are invited to attend the two picnic luncheons scheduled for noon on Friday and Saturday. Both will feature a bill of fare of corned beef and pastrami sandwiches, beer, soft drinks and assorted rel-

ishes and side dishes. The Friday luncheon will be sponsored by the Oklahoma Blue Shield and the Insurance Company of North America will sponsor the Saturday luncheon.

## ATTITUDE ADJUSTMENT PARTY

6:00 p.m.—May 15th—Persian Room—Skirvin Tower Hotel

Cocktails and conversation will be the main feature of the Attitude Adjustment Party scheduled for 6:00 until 7:30 p.m. on Friday evening. Spiced with a variety of hot hors d'oeuvres and the music of the Floyd "Red" Rice combo, the party will be just the place to meet your colleagues before having dinner at one of Oklahoma City's

fine restaurants.

Entrance fee to the party for physicians and their wives is included in the \$5 registration fee for the annual meeting.

A number of medical specialties plan to follow the Attitude Adjustment Party with their own private dinners.

## INAUGURAL DINNER-DANCE

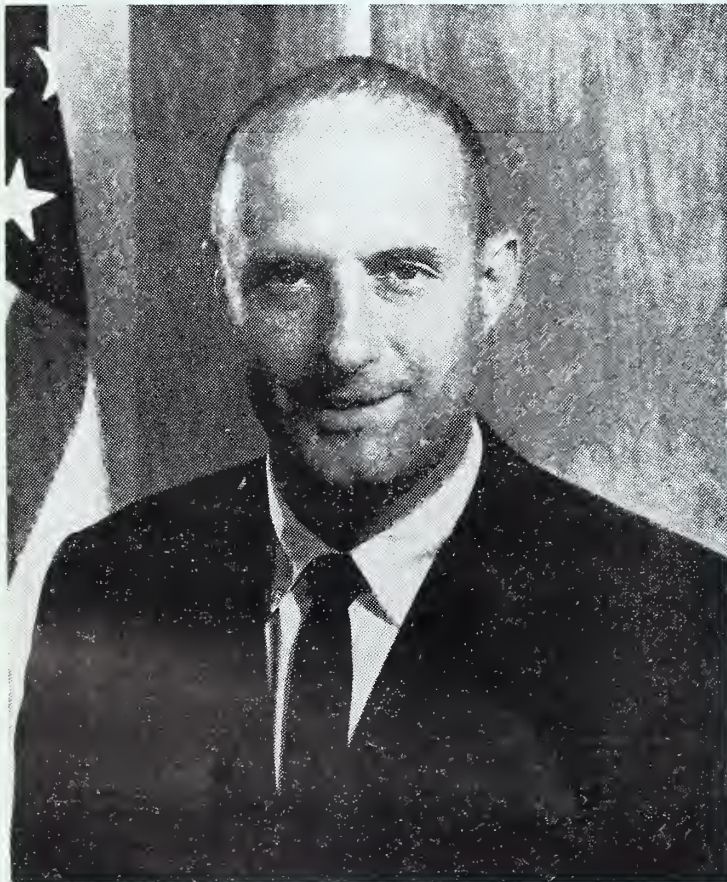
6:00 p.m.—May 16th—Skirvin Tower Hotel

Beginning with the cocktail party at 6:00 p.m. around the Skirvin Hotel's Sun Suite pool and concluding with dancing until midnight, the Inaugural Dinner-Dance is the highlight of the OSMA's annual social calendar. After cocktails, there is a gourmet

banquet with wine service, the inauguration of Ed L. Calhoon, M.D., as OSMA President, and the program will feature a keynote address by Oklahoma's astronaut, Colonel Tom Stafford. The popular Al Good orchestra will play for the dance.

Colonel Stafford lists his occupation as "test pilot" for NASA. In fact he is an astronaut who has been in space three times and has completed five rendezvous and logged 290 hours and 15 minutes in space flight. On December 15th, 1965, he and command pilot Walter Schirra were launched into space on the history making Gemini 6 mission and subsequently participated in the first successful rendezvous of two manned maneuverable spacecraft. His second flight was as command pilot of Gemini 9 which began a three-day flight on June 3rd, 1966. May 18th through 26th, 1969, saw the Colonel as commander of Apollo 10 making the first comprehensive lunar-orbital flight. He is currently assigned as Chief of the Astronaut Office and is responsible for the coordination, scheduling, and control of all activities involving NASA's astronauts.

Tickets for the Annual Dinner-Dance should be purchased in advance from the OSMA at the below cost price of \$10 each.



STAFFORD



# Technical Exhibitors

The Technical Exhibit of the 64th Annual Meeting of the Oklahoma State Medical Association will be held on the second floor of the Skirvin Hotel's Convention Center.

American Pension Investments, Inc.  
Astra Pharmaceutical Products, Inc.  
Ayerst Laboratories  
Ralph L. Bolen Imports, Ltd.  
Bristol Laboratories  
Cardinal Pools of Oklahoma  
Ciba Pharmaceutical Company  
Coca Cola USA  
Jackie Cooper Oldsmobile, Inc.  
Dairy Council, Inc.  
Dictaphone Corporation  
Encyclopaedia Britannica  
Endo Laboratories, Inc.  
Exercycle of Oklahoma  
Flint Laboratories  
\*Geigy Pharmaceuticals  
John Hancock Mutual Life Insurance Co.  
Howe College of Medical Assistants &  
Dental Assistants  
Lakeside Laboratories, Inc.  
Eli Lilly and Company  
Marion Laboratories, Inc.  
Mead Johnson Laboratories  
Medco Products, Inc.  
MedicaRents, Inc.

\*Contributor to Scientific Program

Merck Sharp and Dohme  
\*S. E. Messengill Company  
Mid-Continent Surgical Supply Company  
Niagara Cyclo-Massage of Oklahoma  
Oklahoma Blue Cross-Blue Shield  
Oklahoma Regional Medical Program  
Ortho Pharmaceutical Corporation  
OSMA Group Insurance  
Parke, Davis and Company  
Pfizer Laboratories  
Pipkin Photo Service  
William H. Rorer, Inc.  
Sandoz Pharmaceuticals  
G. D. Searle and Company  
Seven-Up Bottlers of Oklahoma  
\*Smith, Kline and French  
Speegle's Marine Supply  
E. R. Squibb and Sons  
Stover Corporation  
Stuart Pharmaceuticals  
S. J. Tutag and Company  
The Upjohn Company  
Warren-Teed Pharmaceuticals Incorporated  
Winthrop Laboratories  
Wyeth Laboratories

## Scientific And Institutional Exhibitors

"Hair Transplantation"—Dowling G. Stough  
III, M.D., Hot Springs, Arkansas

"Surgical Management of Coronary Artery  
Disease"—Harold C. Urschel, Jr., M.D.,  
Dallas, Texas

"Cancer of the Colon"—American Cancer  
Society

"Management of Venous Thromboembolic  
Disease"—Charles H. Fuller, M.D., Dallas,  
Texas

"Live Hemodialysis Demonstration" — Kid-  
ney Foundation of Oklahoma and Southern  
Kansas

"Extracranial Vascular Surgery for Stroke"  
—Joseph M. St. Ville, M.D., Tulsa, Okla-  
homa

"Oxygen and the General Aviation Pilot"—  
Federal Aviation Administration

Southern Medical Association



# A G E N D A\*

## House of Delegates Meetings

### ANNUAL MEETING—OPENING SESSION

7:00 p.m., May 14th, Skirvin Hotel Convention Center

- |                                     |                                |
|-------------------------------------|--------------------------------|
| I. Call to Order                    | VII. Board of Trustees Report  |
| II. Report of Credentials Committee | VIII. Treasurer's Report       |
| III. Introduction of Guests         | IX. Council, Committee Reports |
| IV. Remarks of Speaker              | X. Introduction of Resolutions |
| V. Nominations for Elections        | XI. Necrology Report           |
| VI. Report of President             |                                |

(Reference Committees will meet at 9:00 a.m., May 15th, in the Park Avenue Suite, Skirvin Tower Hotel)

### ANNUAL MEETING—CLOSING SESSION

9:00 a.m., May 16th, Skirvin Hotel Convention Center

- |                                     |                |
|-------------------------------------|----------------|
| I. Call to Order                    | IV. Elections  |
| II. Report of Credentials Committee | V. Adjournment |
| III. Reference Committee Reports    |                |

\*Condensed Version, Subject to Modification

### OFFICERS TO BE ELECTED

President-Elect (One-Year Term)  
Vice-President (One-Year Term)  
Speaker, House of Delegates  
Vice-Speaker, House of Delegates  
Secretary-Treasurer  
Delegate to the AMA (Two-Year Term)  
Delegate to the AMA (Two-Year Term)  
Alternate Delegate to the AMA (Two-Year Term)  
Alternate Delegate to the AMA (Two-Year Term)  
Trustees From Districts I through V



# Oklahoma State Medical Association

## 1970 DELEGATES AND ALTERNATES

SOCIETY	DELEGATE	ALTERNATE DELEGATE
ALFALFA, WOODS	John X. Blender, M.D.	John F. Simon, M.D.
ATOKA, BRYAN, COAL	Alfred T. Baker, M.D.	Leroy L. Engles, M.D.
BECKHAM	W. M. Leebron, M.D.	Ralph R. Heine, M.D.
BLAINE	Billy Dale Dotter, M.D.	(Not Reported)
CADDO	John B. Miles, M.D.	A. C. Roberson, M.D.
CANADIAN	F. W. Hollingsworth, M.D.	E. W. Young, M.D.
CARTER, LOVE, MARSHALL	Frank W. Clark, M.D.	J. Hobson Veazey, M.D.
CHOCTAW, PUSH- MATAHA	James V. Miller, M.D.	Edward L. Koger, M.D.
CLEVELAND, McCLAIN	Bill E. Woodruff, M.D.	J. A. LaCroix, M.D.
COMANCHE, COTTON	Hayden H. Donahue, M.D.	W. George Long, M.D.
COOKSON HILLS	E. A. McGrew, M.D.	W. C. McCurdy, M.D.
CRAIG, DELAWARE, OTTAWA	Yale E. Parkhurst, M.D.	T. A. Ragan, M.D.
CREEK	W. A. Matthey, M.D.	Donald E. Wicker, M.D.
CUSTER	Robert R. Hillis, M.D.	R. E. Cagle, M.D.
EAST CENTRAL	Robert E. Curry, M.D.	Bob G. Mitchell, M.D.
	David Carson, M.D.	John E. Highland, M.D.
GARFIELD	Robert G. White, M.D.	M. S. Bartlett, M.D.
	Ross Deputy, M.D.	John M. Huser, M.D.
GARVIN	R. E. Witt, M.D.	Emil F. Stratton, M.D.
GRADY	Glenn L. Berkenbile, M.D.	M. O. Lewis, M.D.
GREER, HARMON	Tom S. Gafford, M.D.	Harvey P. Randall, M.D.
HUGHES, SEMINOLE	Ann K. Kent, M.D.	C. K. Mengel, M.D.
JACKSON	Paul H. Rempel, M.D.	Robert D. Shuttee, M.D.
JEFFERSON	John A. McIntyre, M.D.	Joseph W. Stafford, M.D.
KAY, NOBLE	Mark D. Holcomb, M.D.	Avery B. Wight, M.D.
	M. E. Robberson, M.D.	John M. Moore, M.D.
KINGFISHER	B. C. Chatham, M.D.	(Not Reported)
KIOWA, WASHITA	David D. Fried, M.D.	D. D. Pierson, M.D.
LeFLORE, HASKELL	Claude B. Knight, M.D.	(Not Reported)
LINCOLN	Malcolm Mollison, M.D.	Lowell N. Templer, M.D.
LOGAN	Harold A. Stout, M.D.	W. A. Heflin, M.D.
McCURTAIN	Donald E. Becker, M.D.	R. W. Gibson, M.D.
MURRAY	T. C. Glasscock, M.D.	John F. DeJarnette, Jr., M.D.
NORTHWEST	Paul J. Ottis, M.D.	Frank C. Lattimore, M.D.
	Roy W. Anderson, M.D.	Malcolm E. Bridwell, M.D.
OKFUSKEE	J. D. Powell, M.D.	R. K. Alexander, M.D.
OKLAHOMA	William I. Jones, M.D.	G. Conrad Markert, M.D.
	Robert J. Hogue, Jr., M.D.	Curtis O. Bohlman, M.D.
	Thomas E. Rhea, M.D.	Thomas D. Howard, M.D.
	R. W. Dowdell, M.D.	Russell W. Lewis, M.D.
	Richard H. Burgtorf, M.D.	Ralph G. Obermiller, M.D.
	M. K. Braly, M.D.	Joe L. Duer, M.D.
	Charles C. Elliott, M.D.	Charles A. Cashman, M.D.
	Jack A. Barney, M.D.	H. T. Avey, M.D.
	Paul A. Barrett, M.D.	Richard H. Bottomley, M.D.
	John A. Blaschke, M.D.	M. T. Buxton, Jr., M.D.
	Charles D. Bodine, M.D.	R. Barton Carl, M.D.
	D. Kent Braden, M.D.	Charles W. Cathey, M.D.
	J. Hartwell Dunn, M.D.	William O. Coleman, M.D.
	Arthur F. Elliott, M.D.	Paul D. Erwin, M.D.
	Robert S. Ellis, M.D.	William D. Heath, M.D.
	George H. Garrison, M.D.	Thomas H. Henley, M.D.
	Charles M. Harvey, M.D.	William L. Hughes, M.D.



<b>OKLAHOMA (Contd.)</b>	Elwood Herndon, M.D. William E. Hood, M.D. Richard L. Hughes, M.D. Edmond H. Kalmon, M.D. Lucien C. Kavan, M.D. Barney J. Limes, M.D. F. H. McGregor, M.D. Haven W. Mankin, M.D. Lloyd A. Owens, M.D. Don F. Rhinehart, M.D. Clarence Robison, M.D. Bob J. Rutledge, M.D. J. B. Snow, Jr., M.D. S. N. Stone, Jr., M.D. Robert Sukman, M.D. C. Jack Young, M.D. D. D. Albers, M.D. Charles N. Atkins, M.D. James P. Bell, M.D. Marcus B. Shook, M.D.	Felix R. Kay, M.D. Bertha M. Levy, M.D. David C. Lowry, M.D. Robert A. McLaughlin, M.D. John F. Montroy, M.D. Robert J. Outlaw, M.D. C. Dowell Patterson, M.D. J. B. Pitts, Jr., M.D. William B. Renfrow, M.D. Donald R. Resler, M.D. John W. Richardson, M.D. Harris D. Riley, Jr., M.D. Arthur E. Schmidt, M.D. S. R. Shaver, M.D. Robert H. Smiley, M.D. Louis E. Speed, M.D. L. D. Threlkeld, M.D. Theodore W. Violett, M.D. Kelly M. West, M.D.
<b>OKMULGEE</b>	Robert L. Alexander, Jr., M.D.	Floyd T. Hubbard, M.D.
<b>OSAGE</b>	Richard W. Loy, M.D.	Richard F. Harper, M.D.
<b>PAYNE, PAWNEE</b>	Lynn B. Roberts, M.D. George R. Smith, M.D.	Lanny F. Trotter, M.D. Edward M. Thorp, M.D.
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## GENERAL INFORMATION

### REGISTRATION

Mezzanine—Second Floor—Skirvin Hotel

Mrs. John J. Donnell, Chairman

Thursday, May 14th.....1:30-5:00 p.m.  
Friday, May 15th.....8:30-5:00 p.m.  
Saturday, May 16th.....8:30-1:00 p.m.

### HOSPITALITY ROOM

Mezzanine—Second Floor—Skirvin Hotel

Mrs. Richard G. Dotter, Chairman

This room will be open during registration hours, Thursday, Friday and Saturday, for the convenience of guests. Refreshments will be available.

### DOCTORS' DAY EXHIBITS

Venetian Room—14th Floor—Skirvin Hotel

Thursday, Friday and Saturday  
Mrs. Daniel R. Storts, Chairman

### MEDICAL ADVISORS

Harlan Thomas, M.D., Tulsa  
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### CONVENTION COMMITTEE

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School of Instruction  
Breakfast.....Mrs. Charles L. Reynolds  
Tickets.....Mrs. Bryce Petrie

Tickets for Past-Presidents' Breakfast, Luncheon and Fashion Show, and the School of Instruction Breakfast will be on sale at the Registration Desk—Second Floor Mezzanine, Skirvin Hotel, Thursday and Friday.

## PROGRAM

### THURSDAY, MAY 14th, 1970

1:30-5:00 p.m.—REGISTRATION AND HOSPITALITY  
Second Floor, Mezzanine, Skirvin Hotel

5:30 p.m.—PRE-CONVENTION BOARD MEETING  
1601 Guilford Lane, Home of Doctor and Mrs.  
Richard A. Clay  
Hostesses: Mrs. Richard A. Clay and Mrs. J.  
Hartwell Dunn, President, presiding

### EXECUTIVE BOARD ONLY

### FRIDAY, MAY 15th, 1970

8:00 a.m.—PAST-PRESIDENTS' BREAKFAST, Sherry  
Room, 5th floor, Skirvin Tower Hotel. Mrs.  
Charles A. Smith, Chairman

8:30-5:00 p.m.—REGISTRATION AND HOSPITALITY  
Second Floor, Mezzanine, Skirvin Hotel

9:30 a.m.—FIRST GENERAL SESSION  
Venetian Room, 14th floor, Skirvin Hotel, Mrs. J.  
Hartwell Dunn, President, Woman's Auxiliary to  
the Oklahoma State Medical Association, presid-  
ing

CALL TO ORDER: Mrs. J. Hartwell Dunn

INVOCATION: Mrs. George H. Miller

PLEDGE OF LOYALTY: Mrs. Hillard E. Denyer,  
wife of the President of the Oklahoma State Med-  
ical Association

WELCOME: Mrs. M. Thomas Buxton

RESPONSE: Mrs. Alfred T. Baker

ANNOUNCEMENTS: Mrs. Everette E. Cooke

GREETINGS: Ed L. Calhoon, M.D., President-  
Elect, Oklahoma State Medical Association

INTRODUCTION OF SPECIAL GUESTS:

GREETINGS: Mrs. John M. Chenault, Decatur,  
Alabama, President, Woman's Auxiliary to the  
American Medical Association  
Mrs. Bert C. Montague, Oklahoma City, Imme-  
diate Past-Secretary, Woman's Auxiliary to the  
Student American Medical Association

ROLL CALL BY COUNTIES: Mrs. Ben H. Gas-  
ton, Secretary

REPORT OF CREDENTIALS COMMITTEE: Mrs.  
M. M. Appleton

READING OF THE MINUTES: Mrs. Ben H. Gas-  
ton

TREASURER'S REPORT: Mrs. Richard B. Price

REPORTS OF OFFICERS: (Two-minute reports)  
First Vice-President: Mrs. Harlan Thomas



Second Vice-President: Mrs. E. Cotter Murray  
Editor, *Sooner Physician's Wife*: Mrs. W. R. R. Loney  
Editor Auxiliary Page, *The Journal*, Oklahoma State Medical Association: Mrs. Virgil Ray Forester

**REPORTS OF CHAIRMEN:** (Two-Minute reports)

A.M.A.-E.R.F.: Mrs. John Williams  
By-Laws and Revisions: Mrs. Ed L. Calhoon  
Community Health: Mrs. Charles Bodine  
Doctors' Day: Mrs. Daniel R. Storts  
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**REPORT OF NOMINATING COMMITTEE:**

Mrs. Wm. M. Leebron, President-Elect, Woman's Auxiliary to the Oklahoma State Medical Association

**MEMORIAL SERVICE:** Mrs. Elwood Herndon  
**ADJOURNMENT:**

12:00 noon—LUNCHEON AND FASHION SHOW, Persian Room, Third floor, Skirvin Tower Hotel.

**FASHIONS BY BALLIETS**

**SPEAKER:** Mrs. John M. Chenault, President, Woman's Auxiliary to the American Medical Association

3:00-4:00 p.m.—Members - At - Large Tea, Venetian Room, 14th Floor Skirvin Hotel. Hostesses—Mrs. Harlan Thomas and Mrs. E. Cotter Murray

**SATURDAY, MAY 16th, 1970**

7:30 a.m.—SCHOOL OF INSTRUCTION BREAKFAST: Crystal Room, Second Floor Mezzanine, Skirvin Hotel

8:30-1:00 p.m.—REGISTRATION AND HOSPITALITY: Second Floor, Mezzanine, Skirvin Hotel

9:30 a.m.—SECOND GENERAL SESSION: Venetian Room, 14th Floor, Skirvin Hotel. Mrs. J. Hartwell Dunn, President, presiding

**INVOCATION:** Mrs. W. J. Williams

**PLEDGE OF LOYALTY:** Mrs. Ed L. Calhoon, wife of the President-Elect, Oklahoma State Medical Association

**WELCOME:** Mrs. Charles Bodine

**ANNOUNCEMENTS:** Mrs. Robert Smiley

**GREETINGS:** Doctor Hillard E. Denyer, President, Oklahoma State Medical Association

**INTRODUCTION OF GUESTS:**

**GUEST SPEAKER:** Mrs. Gordon Peek, Baton Rouge, Louisiana, President, Woman's Auxiliary to the Southern Medical Association

**ROLL CALL BY COUNTIES:** Mrs. Ben H. Gaston, Secretary

**CREDENTIALS REPORT:** Mrs. M. M. Appleton

**REPORTS OF COUNTY PRESIDENTS:**

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Carter-Love-Marshall: Mrs. James V. Miller, Ardmore

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**UNFINISHED BUSINESS:**

**NEW BUSINESS:**

**ELECTION OF DELEGATES TO NATIONAL CONVENTION:**

**INSTALLATION OF 1970-1971 OFFICERS:** Mrs. John M. Chenault

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**PRESENTATION OF PRESIDENT'S GAVEL AND PIN:** Mrs. J. Hartwell Dunn

**INAUGURAL ADDRESS:** Mrs. Wm. M. Leebron, President, Woman's Auxiliary to the Oklahoma State Medical Association

**ADJOURNMENT—1970 Session**

12:00 p.m.—LUNCHEON: Picnic Luncheon with OSMA, Continental Room, 14th Floor, Skirvin Hotel

1:00-2:00 p.m.—Speaker: James L. Mathis, M.D., "Sex Education."

2:00 p.m.—Universal Health Insurance — Robert J. Myers, Chief Actuary, Social Security Administration, Washington, D.C.

6:00-7:00 p.m.—Social Hour and Reception: Sun Suite, Skirvin Hotel

7:30 p.m.—President's Inaugural Dinner-Dance  
Speaker: Colonel Tom Stafford, Weatherford



## Miscellaneous Advertisements

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The

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## Together We Teach

IN HIS ARTICLE, "Forward Together," which appears in this issue of *The Journal*, Doctor Herbert W. Truett presents a persuasive argument in favor of closing the ranks of medical students, practicing physicians and medical organizations. Translated into actions, Doctor Truett's proposals would result in a pervading, bilateral involvement of the institutions of medical practice and academic medicine. Developed to optimal effectiveness, such a program could satisfy the loudly proclaimed needs of students . . . more relevance; faculty . . . expanded resources; and practicing physicians . . . better preparation. Ultimately this would mean more physicians who were more efficient, thus more effective in dealing with today's health care problems.

For too many years the nation's community of practicing physicians has neglected its teaching responsibilities; we have assumed the title of "doctor" but ignored the real meaning of the word which is "teacher." We have abandoned the task of teaching medical students how to practice medicine to full-time faculty members who, almost without exception, have never engaged in the private practice of medicine. Having committed this dereliction, we then espouse disdain and criticism of "the full-time men" for their idealism and lack of pragmatism.

In their turn, full-time members of medical center faculties generally take pride in *not* being practicing physicians. Their views are usually tolerant, liberal and educated about everything except the institutions of organized medicine. They are frequently contemptuous of the "LMD" and his associations.

With so much hostility and so little understanding between the medical student's world of today and his world of tomorrow, it is entirely natural that he feels frustrated and alienated. He is understandably reluctant to commit himself to organized groups and organized efforts. As a result, his true potential may never achieve full expression.

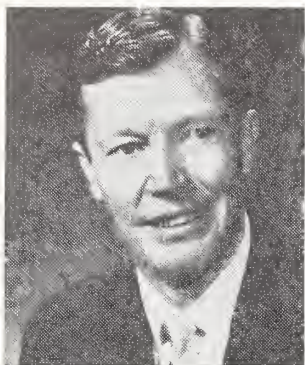
As a first step toward resolution of this conflict the early affiliation of medical students and practicing physicians through common organizational membership is meritorious and should be accomplished. This will, perhaps, encourage the second essential step, the assumption of teaching responsibilities by practicing physicians. With the encouragement of their student colleagues the physician in practice might accept an advisory-sponsorship of one or more students, thus assuring an open, honest opportunity for the student to view the practice of medicine during his academic years. Such an affiliation would certainly enrich the life of the practitioner and, through direct and indirect influences, improve the quality of his practice.

With the students serving as the center of a common interest, communications between practicing physicians and academic physicians would surely improve. There would evolve a proper, mutual respect and understanding.

Eventually we might see the establishment of Departments of Medical Practice in our academic medical centers. Such departments would directly supervise a portion of the curriculum, from the first year of undergraduate medical school work through the final year of postgraduate hospital training. They would be departments with strong, experienced leadership which would be responsible for preparing students to enter the practice of medicine, equipped with a knowledge of medical organizations, an appreciation of medical economics, an understanding of the society of physicians, an awareness of medical jurisprudence and a respect for professional ethics.

If we could teach together we could go forward together. *All together.*—MRJ □





The Good Book says if you sow the wind you reap the whirlwind. It seems to me government has done just that in meddling in the Health Care area. Regardless if politicians and bureaucrats say otherwise, I remain firmly convinced

the American Physician is the most energetic, enterprising and capable man on the American scene; and if left to his own devices could and would have continued to deliver the world's best health care to the world's healthiest people.

We are constantly reminded by a tainted press and propagandized TV (swallow if you can CBS's recent three evening reports) of soaring medical costs and who becomes bureaucracy's scapegoat? We do. It remains a firm, solid fact that government is getting a bargain from us. Of the private health care insurance dollar we get 24 cents, of the

Medicare dollar we get 21 cents and of the Medicaid dollar 11 cents.

When a private industrial company gets into trouble and a management consultant firm is called in, the first recommendation is to hire the best man possible for the top jobs (hang the cost of the salaries!). Government is trying to set things straight by lowering and setting our fees.

The American Physician has long been a very benevolent man; ready to go when called, eager to help and use his God given talents where needed and we must not change. At times it becomes quite difficult to remain calm and purposeful in the face of so much sophisticated nonsense being spoon fed the public by labor and other socialistically oriented segments of society.

Ofttimes it seems they almost have us on the mat but I, for one, can say my shoulders aren't pinned yet. Let's continue to use our energies and influence in preventing *governmental compulsory national health insurance* from becoming the law of the land.

Sincerely yours,

*E. L. Carlson M.D.*



# Mammography in Daily Practice

## HISTORY

EUGENE A. DURSO, M.D.

*Early detection of breast cancer results in an increase in the five-year survival rate. Mammography is capable of detecting breast lesions before they become palpable. This procedure should be part of each physician's armamentarium.*

## INTRODUCTION

**M**AMMOGRAPHY is an examination of the breast by soft tissue x-ray technique. Utilizing meticulous technique, lesions 0.5 cm. in greatest diameter or smaller have been demonstrated by this method. When one employs this method of examination, utilizing the criteria set up to distinguish benign from malignant disease, a high degree of accuracy is obtained. Calcification occurs in over 50 percent of all malignant tumors of the breast. This procedure can, in many cases, demonstrate the presence of calcification without a palpable lesion existing, or help locate a lesion which is difficult to palpate.

Thermography and Xerography are newer methods of examining the breast and hold great promise as aids in evaluating breast disease.

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Mammography is not a new method of examining the breast. It dates back to the early 1900's. Since that time, numerous observers have written extensively on the subject. The most noted of these are Gershon-Cohen, in the 1930's through the 1960's, and Egan, in the 1950's and 1960's. Egan's publications in the middle 1950's in which he introduced a different technique, stimulated many to write on various phases of mammography. During this time, the technique of detecting breast disease has improved greatly.

## TECHNIQUE

The success of mammography depends on the technique. For this reason, the underlying principle of the technique should be known by those physicians who utilize the procedure. Mammography is a soft tissue x-ray technique. It differs from the ordinary x-ray in that it utilizes long exposures, in some cases up to six seconds, compared to a fraction of a second, such as in a chest x-ray. Low kilovoltage in the range of 30 kv's are employed; this results in x-rays which are less penetrating, yielding as previously mentioned, soft tissue technique. It requires a basic understanding of the mechanics of the equipment used. It requires a basic understanding of the value of various types of x-ray films available for this procedure. Most important, it requires the exact positioning of the patient.<sup>11, 4, 3</sup> At first this may



appear to encompass a considerable amount of specialized technical knowledge; however, both the technologist and radiologist can become proficient in the technique within a reasonable period of time.<sup>3</sup> One must insist on a meticulous technique. Without it, interpretation of mammograms would fail to reach the level of accuracy that has made mammography such a useful procedure in the management of breast disease.

### INDICATIONS

The role of indications for mammography has been the subject of a large number of articles. Long lists of indications can be offered, but I believe that it can be summed up in a few sentences. Mammography is a reliable procedure and has been proved to aid in the diagnosis of breast disease, either suspected or unsuspected. It then follows that all female patients between the middle 30's and the middle 60's should obtain a mammogram. One should not think of mammography as a replacement for a biopsy. It is intended to aid and complement the other methods of management of breast disease.<sup>16</sup> With the indications for mammography in mind, let us look at the four branches of medicine which are confronted most frequently with the problems of breast disease. Listing them in the order of numbers of patients seen for breast disease, they are Obstetrics and Gynecology, General Practice, General Surgery, and Internal Medicine.

The obstetrician and gynecologist has the highest percentage of patients with breast problems since he deals exclusively with the female and his patients have symptoms that

cause the greatest amount of difficulty in diagnosis. The constant change in the anatomy of the breast, influenced by the menstrual cycle and pregnancy, results in a fluctuating pattern of symptoms in the vague complaints suggesting the possibility of breast disease. At times it is almost impossible to decide what symptoms to explore and what symptoms to ignore. When one adds this list of patients to the so-called high risk patient, that is, one with a family history of breast cancer, fibro-cystic disease, and over forty, it becomes apparent why the obstetricians and gynecologists avail themselves of this procedure more than any other group of physicians. It is in this group of patients that mammography proves to be an excellent method of determining what, if any, disease process is present in the breast.<sup>6, 7, 9</sup>

The family physician has many of the problems inherent in the various specialties. He frequently is placed at a disadvantage, for the patient does not routinely present herself for a breast examination. The result of a thorough mammographic examination coupled with clinical information and findings will help determine the management of a patient with a vague breast complaint. Mammography is capable of detecting lesions less than 0.5 cm. in greatest diameter.<sup>10</sup> When one employs basic criteria for benign and malignant disease, it is possible to detect a small lesion in the fatty portion of the breast which is non-palpable, even by a trained observer.<sup>5</sup>

The general surgeon on the other hand, has a number of problems which are unique to his particular specialty, such as the follow-up of a patient who has known carcinoma of the breast. It is a well-established fact that as high as twenty percent of the patients who have had carcinoma of the breast will develop another lesion in the opposite breast. For this reason, mammography has become a very useful procedure in the follow-up examination, detecting the early onset of the second carcinoma in the remaining breast.<sup>16</sup> There are many who feel that all patients with known benign disease such as fibro-adenoma and cystic disease, should have a mammogram before surgery; for in a significant number of cases, a carcinoma has been found to be present in the breast, overlooked because of the at-

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tention being paid to the very obvious benign lesions. When a small lesion is present, exact location for biopsy is frequently difficult. A method devised by Curcio, *et al.*, has made it possible to forecast the exact location of a small or non-palpable lesion.<sup>1</sup>

The internist is not frequently confronted with the problem of breast disease; however, a significant number of cases do come to his attention and require his usage of mammography for many of the reasons mentioned above.

#### DISCUSSION

For many years the question has been asked, "Has early detection of cancer of the breast changed the course of the disease?" A number of reports have been made documenting the fact that a five-year survival rate is much higher in patients who have been operated on for carcinoma of the breast prior to the onset of metastatic disease.<sup>12, 13</sup> The same series of reports indicate that metastatic disease significantly increases with an increase in the size of the tumor. It follows, therefore, that the smaller the tumor, the lower the percentage of metastatic disease, and the higher the percentage of five-year survivals following surgery for carcinoma of the breast. As mentioned above, mammography is capable of detecting carcinoma before it has become palpable. Calcification is a common finding in carcinoma of the breast.<sup>15</sup> The exact mechanism of its production is unknown. Utilizing quality technique, calcification can be demonstrated in carcinoma without the presence of a mass. Mammography's most important role in the diagnosis of breast disease is its ability to expose a lesion that is not palpable. This is possible in a patient who has large breasts where small lesions go undiscovered or in a patient who has a carcinoma hidden by a number of nodules caused by fibro-cystic disease.

One must be familiar with the following important statistics when trying to evaluate the need for a procedure such as mammography. Carcinoma of the breast is the leading cause of cancer death in women today.<sup>17</sup> There are 68,000 cases of carcinoma of the breast each year, and 27,000 deaths from carcinoma of the breast each year.<sup>2</sup> Approx-

imately 90 percent of the carcinomas of the breast that are operated on today are lesions that are found by the patients themselves.<sup>14, 8</sup> These lesions average approximately 3.3 cm. in greatest diameter. A lesion this size is associated with metastatic disease 75 to 80 percent of the time. These patients have approximately a 40 percent chance of surviving five years. Published reports indicate that when a lesion is less than 1.1 cm. in size, the incidence of metastatic disease is greatly reduced and is in the magnitude of 40 percent. Approximately 80 percent of these patients are alive at the end of five years. Two-thirds of all breast diseases occur after the age of forty. Under the guidance of a trained radiologist, employing basic technique, one can expect approximately 85 percent accuracy in the diagnosis of breast disease where mammography is employed. Physical examination of the breasts alone by trained surgeons is about 70 percent accurate.<sup>5</sup>

#### NEW METHODS OF EXAMINATION

Mammography, as we know it today, employs the use of an x-ray tube and an x-ray film. Numerous investigators have tried variations of either the Gershon-Cohen technique or the Egan technique. The results have been the employment of different types of film, alterations in the amount of x-ray exposure, and new and different positions of the patient. There is a constant search for improvement in mammography, and undoubtedly, new methods will be devised. Thermography is a relatively new medical modality which has a great deal of promise in the detection of breast disease as well as in other fields of medicine. Thermography is based on the temperature changes that take place in the body and can be recorded on a Polaroid type of film, requires no radiation, and is extremely sensitive in detecting the presence of an abnormality. Xerography is another method of examination of the breast as well as other parts of the body. It employs the x-ray tube, but does not employ the routine type of x-ray film. It is felt that Xerography can give a three-dimensional effect and can reduce the amount of radiation received by the patient. Xero-radiography is hampered at the present time by the avail-



## Mammography / DURSO

able equipment, but may very well become a useful instrument in the examination for breast disease, once the equipment becomes available to the general medical public.

### CONCLUSION

1. Twenty-four percent of cancer deaths in the female result from breast cancer.
2. Mammography is effective in the detection of breast disease.
3. Early detection of breast disease increases the five-year survival rate.
4. Mammography is capable of detecting lesions which are not palpable.
5. Mammography is a procedure which can be done by trained personnel.
6. Thermography and Xerography are newer methods of examination of the breasts which are available in the detection of breast disease. ☐

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## MEDICAL-LEGAL INSTITUTE

FOUNTAINHEAD LODGE — LAKE EUFAULA

July 23rd-25th, 1970

The joint OSMA-Oklahoma Bar Association Medical-Legal Relations Committee is co-sponsoring a three-day institute at Fountainhead Lodge on Lake Eufaula during July. Purpose of the institute is to foster better relations between the medical and legal professions while, at the same time, giving those in attendance the latest information.

REGISTRATION FEE: \$35.00

Advanced registration should be sent to Medical-Legal Institute, 601 N. W. Expressway, Oklahoma City, Oklahoma 73118.



# Defective Iodide Organification in "Cryptothyroidism"

J. DARREL SMITH, M.D.  
COSME R. CAGAS, M.D.  
J. RODMAN SEELY, M.D.  
JOSEPH NEEMAN, M.D.

*Lingual retention of thyroid tissue,  
frequently associated with defective  
hormonal synthesis is the major cause  
of congenital cretinism, not athyrosis.  
This new understanding makes prevention  
of the ravages of hypothyroidism on  
the fetal brain a real possibility.*

**V**ISIBLE OR GOITROUS thyroid glands located in the lingual and sublingual areas have been recognized for over a century. However, the fact that a large number, if not the majority, of sporadic non-goitrous or so-called "athyrotic" cretins have an arrest of the descent of the primordium of the thyroid has been emphasized only recently. The cause for the maldescent of the thyroid or cryptothyroidism, a term suggested by Little and co-workers, has remained obscure.

From the Department of Pediatrics and the Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The Clinical Research Center is supported by Grant No. FR-62 from the Division of Research Facilities and Resources, National Institutes of Health. Doctors Cagas and Neeman were research fellows in Pediatric Endocrinology and Metabolism supported by Grant No. 2T01HD-00064-06 from the National Institutes of Health.

This paper is part of a series which were presented at the Clinical Research Center Day in April, 1968 in Oklahoma City. Several other papers from this group will be presented in the June issue of The Journal.

Furthermore, it has been assumed generally that the development of a lingual goiter is due simply to hypertrophy of the embryonic vestiges in response to thyroid deficiency. This report presents for the first time direct evidence that a metabolic defect in thyroid hormone synthesis likely has a role in the pathogenesis of euthyroid lingual goiter and sporadic cretinism with cryptothyroidism. A provocative test to detect the heterozygote with the transmittable defect is also presented.

Figure 1 shows an 11-year-old girl we studied recently with a large lingual goiter who was clinically and functionally euthyroid. The PBI was 4.8  $\mu$ g percent and the serum thyroxine 4.1  $\mu$ g percent. Of considerable interest was the finding of an organic binding defect as demonstrated by the discharge of 26 percent of the trapped  $I^{131}$  following administration of KSCN (Figure

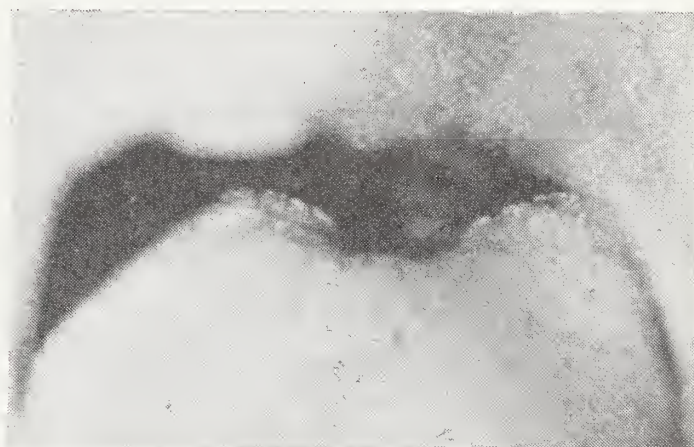


Figure 1. Lingual goiter—11-year-old female.



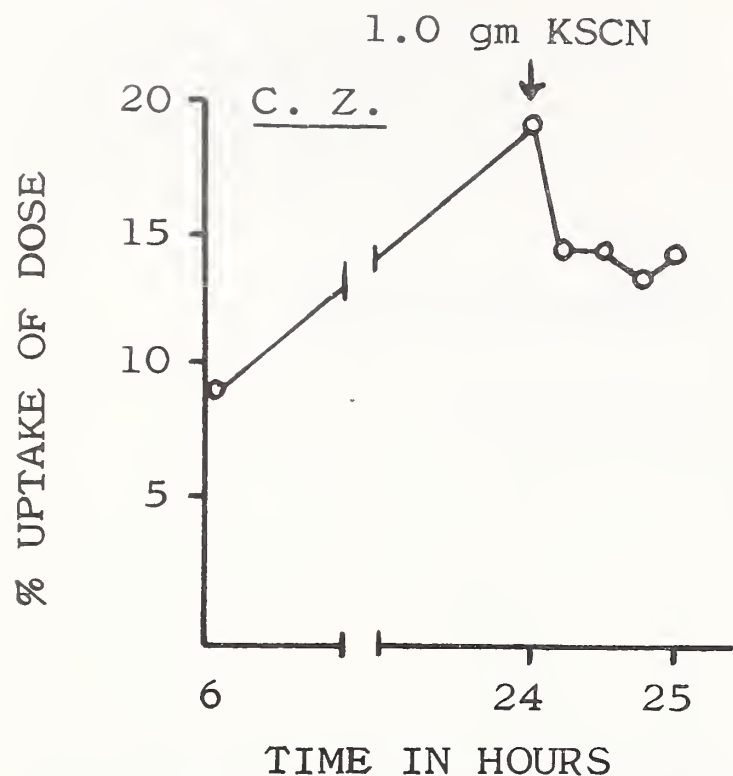


Figure 2.  $I^{131}$  uptake by lingual goiter with KSCN discharge of unbound iodine.

2). This unique finding prompted a search for a similar defect in thyroid hormone synthesis in “athyrotic” cretins with lingual retention of thyroid tissue. Assuming that a metabolic defect in a lingual thyroid might have the same autosomal recessive transmission as that with pretracheal goiters due to metabolic defects, studies of the parents to detect the heterozygous state were undertaken.

Seven of the last eight untreated non-goitrous cretins ages two to seventy-six months investigated in the Clinical Research Center have had lingual retention of thyroid tissue demonstrated by scintiscan with 10-50  $\mu\text{c}$   $I^{131}$ . Figures 3 and 4 show a frontal and lateral scan representative of the group showing uptake of radioiodine at the base of the tongue.

Table 1 compares the chronological age, height age and bone age at the time of the study and shows the serum PBI and thyroxine levels. There were six girls and one boy, a sex ratio commonly reported for ectopic thyroids and athyrotic cretinism. All were frankly myxedematous with marked delay in growth and bone age. PBI values ranged from 0.8 - 4.6  $\mu\text{g}$  percent. In the two oldest children there were significant discrepancies in the PBI and serum T4, which are usually present in all of the inborn errors

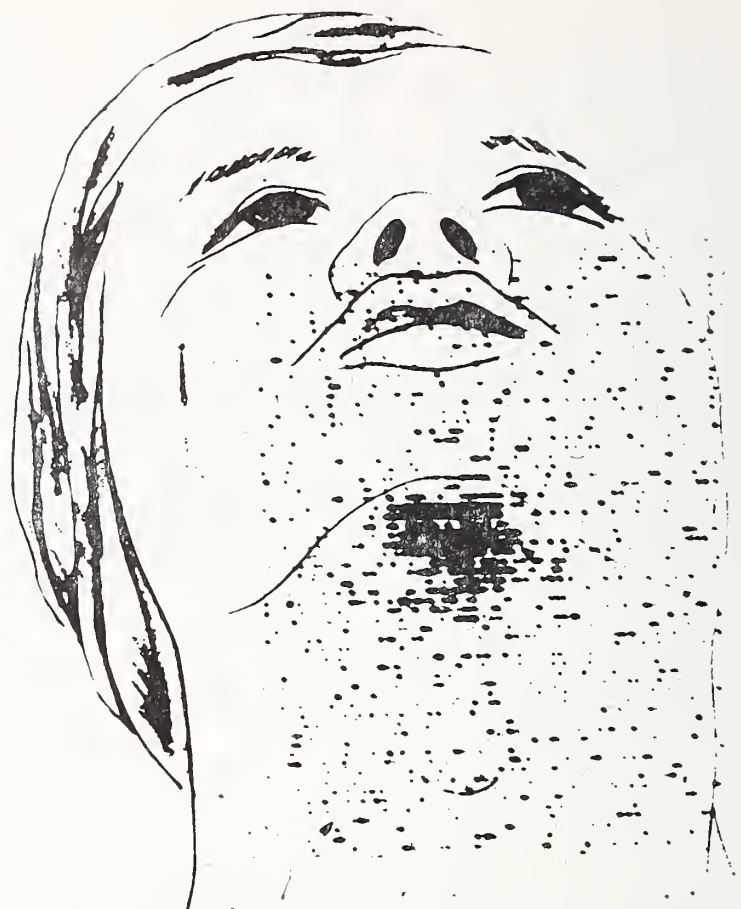


Figure 3. Frontal scan— $I^{131}$ .

A graduate of the University of Tennessee School of Medicine, J. Darrel Smith, M.D., is presently Professor of Pediatrics and Associate Director of the Clinical Research Center at the University of Oklahoma Medical Center. Certified by the American Board of Pediatrics, Doctor Smith is a member of the Pediatric Research Society, President of the Southern Society of Pediatric Research, the Endocrine Society and the Alpha Omega Alpha.

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A 1959 graduate from the Hadassah Hebrew University Medical School in Jerusalem, Joseph Neeman, M.D., is now a Pediatric Endocrinologist in Hiafa, Israel.





Figure 4. Lateral scan—I<sup>131</sup>.

of thyroxine synthesis except the trapping defect.

The maximal I<sup>131</sup> uptake by the lingual thyroids ranged from two to 10.8 percent before TSH stimulation (Table 2). After three daily doses of five units TSH, the uptake in five infants remained essentially the same, increased from five to 12 percent in one and decreased from 10.8 to five percent in another. The thiocyanate dumping test which detects failure of organic binding of iodine to tyrosine, the second step in thyroxine formation, was performed in six of the patients after TSH stimulation, while in patient number five, who had a 24 hour uptake of 11 percent, it was done without TSH stimula-

Table 1

Case No.	Sex	Age in Months			PBI μg%	T <sub>4</sub> μg%
		Chron.	Ht.	Bone		
1.	F	29	12	1	1.7	0.4
2.	F	6	3	3	0.8	0.6
3.	F	20	5	5	1.0	0.5
4.	F	23	16	9	2.3	
5.	M	17	9	0	2.3	1.2
6.	F	76	36	30	4.4	1.3
7.	F	74	40	3	4.6	1.0

Table 2

Case No.	% I <sup>131</sup>		Uptake 24 hr.	Post TSH			KSCN Dump
	4	6		4	6	24 hr.	
1.		4	5	0		7	+
2.	4	4	3	4			+
3.	5	3.4	3.8	10	12	6.7	—
4.	6		6	7			—
5.	10		10.8	8		5	—
6.	1	3	1	1	2	2	—
7.		1	2		2	3	+

tion. An oral dose of KSCN, equal to 150 mg. per liter of calculated extracellular fluid was administered. At the time of the test the uptakes ranged from two to 10.8 percent. Three of the seven children had a positive thiocyanate test. The most striking example of this is shown in Figure 5. There was a 100 percent discharge of the trapped radioiodine in 15 minutes which persisted for at least 24 hours. In the second child there was a complete discharge of the trapped iodine within 60 minutes but three percent had reaccumulated by 24 hours. The third infant had a 22 percent discharge of iodide within 30 minutes which did not reaccumulate. In the clinically and functionally euthyroid nongoitrous mother of this third infant, KSCN did not release I<sup>131</sup> from the unstimulated gland. However, as shown in Figure 6, following TSH stimulation thiocyanate discharged 65 percent of the I<sup>131</sup> within one hour. The father has not been available for study.

Neither of the normal parents of the first infant with the complete dumping effect had a discharge of trapped iodide by thiocyanate following TSH stimulation, but it is noteworthy that there was a relatively small in-

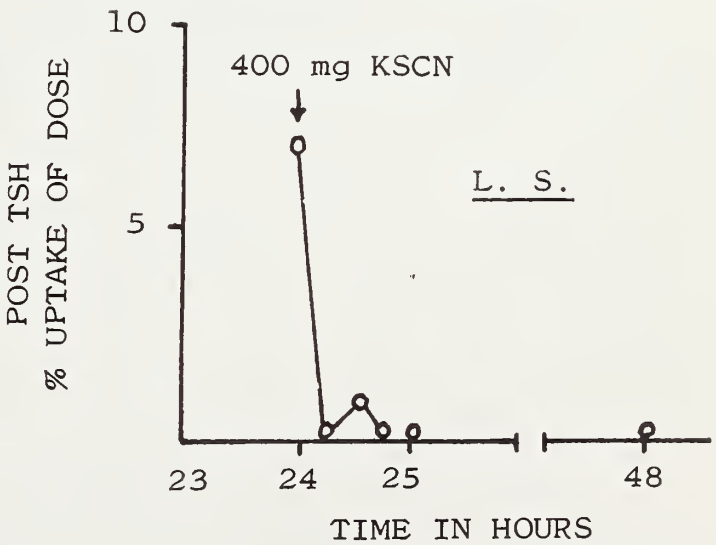


Figure 5.



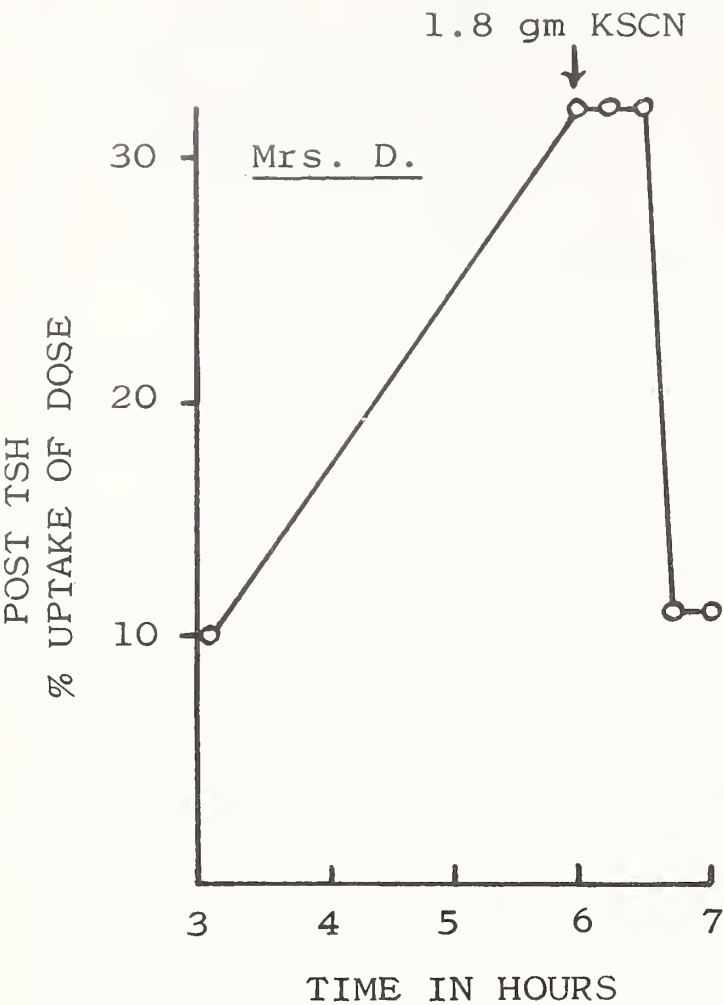


Figure 6.

crease in the  $I^{131}$  uptake after three days of TSH administration (Figure 7). In contrast, the PBI and serum  $T_4$  increased by approximately 4  $\mu$ g percent in each parent. These discordant findings suggest that the thyroids of these parents were relatively insensitive to TSH stimulation of the iodide trapping mechanism, but were quite responsive to stimulation of production and/or release of thyroid hormones. The significance of this response is open to speculation.

The mothers of two of the four infants who had negative thiocyanate tests had normal thyroid function studies, including the response to TSH stimulation. The thiocyanate dumping test also was negative. Three normal adults and four children studied in a similar manner also have had negative thiocyanate tests after TSH stimulation. Thyroid antibody titers by the tanned red cell agglutination technique were normal in four patients and four mothers studied.

The association of a metabolic defect with an ectopic thyroid, with or without cretinism or hypothyroidism, has been suggested by

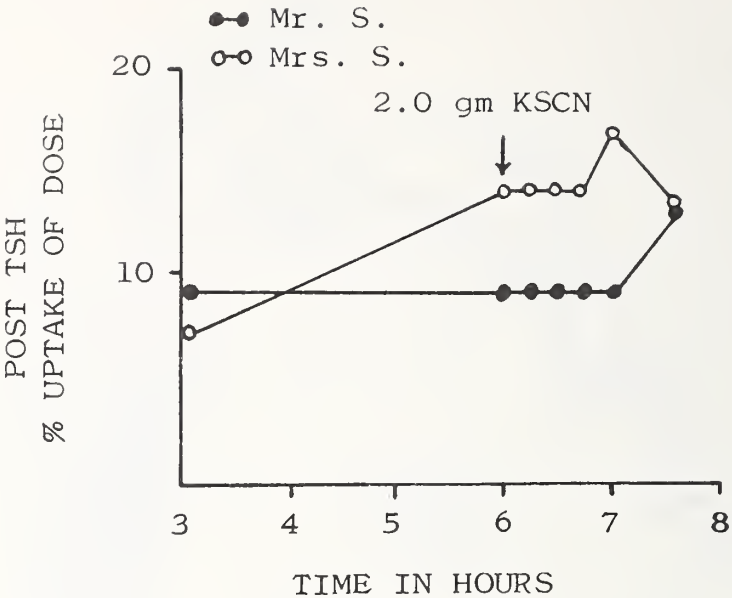


Figure 7.

other investigators but only on an indirect basis. Namely the finding of normal or even high uptake of radioiodine by the ectopic gland or noting some discrepancy between the PBI and BEI or serum thyroxine, as seen in two of our patients. These findings are in fact frequently present in most of the inborn errors of thyroid hormone synthesis which produce pretracheal goiters with or without cretinism. In regard to a genetic association it is of interest that we have found only one report of two hypothyroid siblings with ectopic thyroid (and this mother had a goiter with a high  $I^{131}$  uptake), but no studies to detect a metabolic defect were made.

In conclusion the findings of our study indicate:

1. There is a high incidence of cryptothyroidism in "athyrotic" cretins.
2. In some ectopic thyroids, with or without cretinism or hypothyroidism, a definite organic binding defect can be demonstrated. Other defects in thyroid hormone synthesis are strongly suggested by the normal radioiodine uptake and the discrepancy between the PBI and serum thyroxine.
3. Provocation with TSH seemed to be necessary to demonstrate the defect in the phenotypically normal heterozygous parent, as well as in the cretins.
4. The demonstration of an organic binding defect in a euthyroid mother and her cretin infant suggests a genetic transmission and would explain the etiology of some instances of familial so-called "athyrotic" cretinism. Appropriate studies will likely de-



fine other inborn errors in thyroid hormone synthesis in association with cryptothyroidism.

5. Identification of the carrier state of a metabolic defect in the parents of a cretin is the first step which will permit prenatal

therapeutic measures such as thyroxine feeding via amniotic fluid, to prevent the brain damage of fetal hypothyroidism in babies of subsequent pregnancies. ☐

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## MEDICAL SCHOOL APPLICANTS INCREASE

According to a recent publication from the Association of American Medical Colleges the largest number of applicants ever processed were initiated by 21,118 applicants seeking placement in 1968-69 first year class of American medical schools. At the same time, the average number of applications per individual moved upward from five in 1967-68 to 5.3 in 1968-69.

AAMC theorizes that the underlying cause of the increase may be greater emphasis on the undergraduate science programs, more student interest in the health professions, and the fact that there are more 22-year-olds in the population composition.

One or more offers of acceptance were extended to 10,092 applicants for the 9,740 available places. This represents an increase of 426 first year places over 1967-68.

Two hundred nineteen of the 426 new first year places for 1968-69 were provided by five new medical schools in Connecticut, California-Davis, California-San Diego, Texas-San Antonio, and Mount Sinai. The remaining 207 new first year places were added by the 95 existing schools.

Another interesting fact reported by AAMC was that the MCAT scores of accepted students have gradually increased year by year since 1960-61. In that year the mean MCAT score for quantitative ability on accepted applicants was 533. In 1968-69 it took a quantitative ability score of 600 to be accepted.



## Tumor Clinic Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.

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### CASE No. 28: Squamous Cell Carcinoma of the Larynx

**PRESENTATION:** The patient is a 51-year-old female who presented with a four month history of hoarseness and throat pain. This lady has been a smoker since the age of 13 years. In the middle of December, 1969, a laryngoscopy and biopsy were performed at another hospital. Six pieces of tissue measuring three to four mm were obtained; however, the sections were reported as showing only chronic inflammation with hyperkeratosis. I don't have any information as to what the surgeon encountered at

that time. The patient was asked to report back to her physician in about four months for a follow-up examination. Her hoarseness continued and the throat pain became worse. In addition, she developed a cough and pain on swallowing. She was then referred to the University of Oklahoma Medical Center.

On presentation in our clinic, the pertinent findings are limited to the larynx and neck. On mirror laryngoscopy there is a mass occupying the right and anterior portions of the endolarynx. It appears to originate in the angle between the epiglottis and the right false vocal cord. It is an exophytic, ulcerated lesion which involves the laryngeal surface of the epiglottis at least to the midline and the right false vocal cord. It is difficult to see below this mass. A few days ago, direct laryngoscopy was carried out and the findings essentially are as follows: the tumor involves the epiglottis to the midline and the entire right false vocal cord. It extends to the right true vocal cord but does not involve the true vocal cord on the right side. The right arytenoid is not involved. The anterior half of the right true vocal cord has undergone polypoid change. There is a solitary polyp on the anterior third of the left true cord. There are two small movable, non-tender nodes in the deep cervical chain at the bifurcation of the right carotid artery. No nodes are palpable in the left side of the neck.

**DOCTOR SNOW:** Regarding the polypoid tissue, were the findings based on gross inspection or biopsy?

**PRESENTER:** Both. The lesion on the right true vocal cord is an inflammatory

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.



polyp, histologically, and the main mass is a well-differentiated squamous cell carcinoma. The chest x-ray is negative for metastatic lesions.

DOCTOR CONDIT: Any questions about this history?

DOCTOR SNOW: What stage is this lesion?

PRESENTER: This lesion is Stage III, because it is a  $T_2N_1M_0$ . The presence of nodes makes it Stage III. You might want to comment on this once you see the lady.

DOCTOR SNOW: I would agree from your description that this lesion is a  $T_2$ .

PRESENTER: One point I specifically want to make, Doctor Snow, is that the true cord is not involved, but there is not an adequate margin, I think, to do a supraglottic resection, based on direct inspection at direct laryngoscopy.

DOCTOR SNOW: Certainly the one who is doing the direct laryngoscopy has the best chance to evaluate this point. My understanding is that you do not think that an adequate margin could be obtained between the true vocal cord and the tumor?

PRESENTER: Even allowing for the fact that we might be satisfied with slightly less than a centimeter margin in the endolarynx, I still don't think it would be what we want.

DOCTOR CONDIT: Doctor Snow, would you begin the discussion on this patient?

DOCTOR SNOW: This lady has a rather large lesion, and I certainly feel that it is a  $T_2$  lesion. With the nodes in the neck, it is a Stage III lesion. It is unfortunate that there isn't a little more distance between the tumor and her true vocal cord since a partial laryngectomy could be performed in that situation. In view of the fact that one can't obtain an adequate margin in this particular lesion between the true cord and the tumor, a partial laryngectomy would not be feasible. The treatment of choice in her instance is a total laryngectomy with a right neck dissection.

DOCTOR CONDIT: Doctor Bogardus?

DOCTOR BOGARDUS: I agree.

DOCTOR CONDIT: In which patients do you think pre-operative radiation therapy is useful?

DOCTOR BOGARDUS: Pre-operative radiation therapy could be used in the management of this lesion. I assume that this pa-

tient would be entered into the study comparing pre-operative radiation therapy and laryngectomy with laryngectomy alone.

DOCTOR SNOW: Right. We shall either proceed with the surgery immediately, or she will receive 3,000 rads in a period of ten days, 300 rads per day, and the surgery will take place on the eleventh day, depending upon which group she falls into.

DOCTOR PARKER: I've been asked about that. How many categories do you have in this study? Do you also have a group receiving chemotherapy?

DOCTOR SNOW: No, in this particular study of carcinoma of the larynx, no chemotherapy is involved. The number of categories is unfortunately quite large. Only patients who are Stages II, III, and IV are admitted to the study, but they are subdivided by the anatomical site of the lesion into supraglottic, glottic, transglottic and hypopharyngeal. There are three stages with four possible anatomical sites in each stage, so that is a total of twelve categories. Then there are double that number depending on whether they receive radiation therapy or not. The problem here, of course, is that it is very difficult to get a sufficient number of cases in any one of these 24 categories to make a study statistically significant unless the difference in five year survival between the group receiving radiation and the group that does not is very great. This magnitude of the difference would have to be at least 15 percent or so for us to be able to demonstrate it in the limited patient population that we have. In other words, unless the difference in five year survival between the radiation group and the no radiation group is at least 15 percent, the study could not be completed in the lifetime of our current staff.

DOCTOR PARKER: I thought we presented a case here once that was borderline operable and you were going to use chemotherapy and then radiation therapy.

DOCTOR SNOW: There are other studies for those patients who are not deemed operable, and they may either receive radiation therapy alone or radiation therapy after Methotrexate. That is a study in which Doctor Condit and Doctor Bogardus are involved.

DOCTOR CONDIT: I have a question about your study. I didn't realize there were so many sub-groups. Is this really necessary



## *Tumor Clinic* / BOTTOMLEY

from the point of view of the natural history of the tumors in different sites of the larynx?

DOCTOR SNOW: Yes, because of the rather striking difference in the five year survivals. For example, glottic lesions have a five year survival of approximately 75 percent with laryngectomy. Supraglottic lesions tend to have a 50 percent five year survival rate. Pyriform sinus lesions have a 20 percent five year survival rate. Therefore, meaningful conclusions can be drawn only if the treatment schedules are compared within the same anatomical site. It is also essential that they be staged, although the differences in survival rate are less striking among Stages II, III and IV for a given anatomical site than the differences in survival for the various anatomical sites. If

anything were to be eliminated, I would rather eliminate staging.

DOCTOR BOTTOMLEY: You can do that with statistics.

DOCTOR SNOW: Yes, there is no reason why we can't in the final analysis.

DOCTOR PARKER: Are you carefully staging each one of these patients?

DOCTOR SNOW: Yes, each patient must be staged carefully. I feel that this information should be recorded as part of the primary diagnosis.

*FINAL DIAGNOSIS:* Squamous cell carcinoma of the larynx, Stage III ( $T_2N_1M_0$ ) with probable metastases to the right cervical nodes.

*TUMOR CLINIC RECOMMENDATIONS:* The patient should have a total laryngectomy and right radical neck dissection. This may be preceded by radiation therapy to 3,000 rads, depending upon which study group she falls into. □

## **INSURANCE INTERESTED IN ORGAN TRANSPLANTS**

At least one life insurance company is now allowing its policy holders to use anticipated death benefits to pay for a second chance at life. The new plan allows the insured to draw against death benefits for up to 50 percent of the face amount of the policy or \$25,000, whichever is lower, to pay for transplants or artificial devices to replace a heart, lung, kidney, or liver.

## **VACATION IDEA**

Many insurance companies now offer travel accident policies which make good sense to the family on a vacation. These policies frequently cover all medical expenses, costs of remaining in a particular place longer than anticipated because of the illness of one or more members of the family, and death benefits. Cost of this additional insurance to protect against extra exposure while being on the highway for a vacation is well worth the investment.



# Books As Clinical Tools

*"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all."*—Osler

## CLINICAL REFERENCES IN PULMONARY DISEASE

MARTIN FITZPATRICK, M.D.\*

A broad selection of reference material is available to assist the busy practitioner in the proper evaluation and management of his patient with suspected bronchopulmonary disease. They range all the way from free monographs made available through the services of national and local Tuberculosis and Respiratory Disease Associations, to more comprehensive and expensive texts containing detailed multidisciplinary approaches to all aspects of bronchopulmonary disease. This outline of reference resources in this specialty area attempts to review and evaluate some of the current crop of available textbooks and to indicate their depth and scope of subject matter.

The two standard textbooks of Internal Medicine enjoying the greatest popularity in America, edited by Harrison;<sup>1</sup> and by Besson and McDermott,<sup>2</sup> remain with each subsequent edition as the hallmark of authoritative yet concise sources of information. The practical format of presentation is quite similar in both of these texts, and a great deal of useful information is to be found in their sections dealing with infectious diseases, disorders of respiratory physiology, and the organ system description of various pulmonary diseases.

\*Professor of Medicine and Continuing Education, University of Oklahoma School of Medicine; Director, Emphysema Project, Oklahoma Regional Medical Program.

One of a series sponsored by the Department of Continuing Education.

Two excellent paperback monographs are distributed by the National and Oklahoma Tuberculosis and Respiratory Disease Associations to physicians which cover important aspects of the pathogenesis, diagnosis, and treatment of tuberculosis and chronic obstructive lung disease.

A new edition of *Diagnostic Standards and Classification of Tuberculosis*<sup>3</sup> contains important revisions relating to changing concepts of the "open-negative" case, atypical mycobacterial infections, skin testing, and altered pulmonary function resulting from tuberculous disease. This manual continues to be extremely popular with medical students, house officers, and practitioners as a quick informative reference and teaching resource.

*Chronic Obstructive Pulmonary Disease*<sup>4</sup> has proved to be equally popular as a handy and authoritative guide to detection and treatment of a rapidly growing national health problem of major proportions. A lucid description of the altered pathophysiology of emphysema and chronic bronchitis is combined with helpful suggestions concerning clinical recognition and treatment; all in terms readily familiar to the practicing physician.

Three major textbooks are available for those desiring a more comprehensive approach to various facets of bronchopulmonary disease. A new edition of Hinshaw's *Diseases of the Chest*<sup>5</sup> continues to emphasize principles of clinical and roentgenographic correlation in diagnosis. Baum's *Textbook of Pulmonary Disease*<sup>6</sup> is a major reference source with a broad galaxy of editorial talent covering all aspects of pulmonary disease of interest to the internist, general practitioner, surgeon, and radiologist. The excellent book by Bates and Christie<sup>7</sup>



remains as one of the more popular texts aimed at those engaged in the practice or teaching of medicine. It continues the teachings of Jonathan Meakins by employing specific case reports and stressing a combined assessment of clinical, physiological, and roentgenographic features in the work-up of each patient. It has the most comprehensive bibliography in its field, listing some 2,358 pertinent well-chosen references.

The growing national health problem of obstructive lung disease has resulted in an increased medical awareness of the true prevalence of respiratory insufficiency and failure, as well as their protean manifestations and expressions in differing clinical settings. Again, a number of pertinent texts have appeared dealing with these and related topics, ranging from a fairly simple expression of altered pathophysiology to outlining major community approaches to the rehabilitation of victims of this group of diseases. The book by Filley<sup>8</sup> is to be commended for its brevity, clarity and simplicity of statement, and price. It deals with the genesis of respiratory insufficiency and its treatment in lucid terms and illustrations. The first portion of the book analyzes the major symptoms and signs of patients with chronic pulmonary disease while the second covers the physiologic disturbances associated with respiratory failure.

The monograph by Sykes, *et al.*,<sup>9</sup> is an outstanding presentation by the Hammersmith Hospital group which will help all physicians, surgeons, or anesthetists to treat respiratory failure more logically and effectively. This timely manual deals with important concepts and facts of oxygen therapy, tracheostomy care, respiratory failure in neo-

nates and infants, and mechanical ventilation in terms of both the simple and more sophisticated approaches to management. This important contribution will be of great assistance to all physicians concerned with the hospital treatment of seriously ill patients.

The book by Rodman and Sterling<sup>10</sup> outlines an important emerging concept in the treatment of emphysema and related disorders. It is designed primarily for the relatively few practicing physicians who will assume the main brunt of the problem as the captains of multidisciplinary clinical teams in their local communities. This approach seeks to coordinate the talents and expertise of the inhalation therapist, the homecare nursing instructor, the intensive respiratory care nurse, the pulmonary physical therapist, and the pulmonary function technologist in the management of patients with severe emphysema. This book rightly emphasizes the need for close supervision and guidance by the physician heading such a group. A considerable amount of practical advice will be found in this book by physicians planning to develop programs to combat emphysema in their local communities. □

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## Forward Together

HERBERT W. TRUETT, JR., M.D.

*Membership for medical students in the Oklahoma State Medical Association is considered with presentation of reasons for more enthusiastic liaison between students and private practitioners.*

THE MAY 5th, 1969 issue of *The AMA News* included the discussion of an issue which has concerned me a great deal over the past few years, and as an activist with a conservative outlook, it seems appropriate that I comment, since the issue is germane to the medical environment here in Oklahoma. The issue concerned a proposal under consideration by the Colorado Medical Society to admit students as active, voting members.

Donald G. Derry, executive secretary of the CMS described the program as "an effort to bring students into closer association with physicians in practice by voluntary, informal contact." He further stated, "It deals more with the actual problems of organized medicine. In that way," he concluded, "the student begins to relate with medical problems as they are rather than as they are made out to be through the academic environment."

W. M. Covode, M.D., as president of the CMS favors the move because he feels it may reverse the trend of declining membership in organized medicine.

It seems that these reasons are valid, per-

tinent ones, but they do not constitute enough reason for the action. I think, however, that there are other reasons—many others—which give good cause for such consideration. Whether the proposal on full voting rights is advisable or not, I feel, is best left aside for the present to be solved as a local, individualized issue by those persons most familiar with local circumstances.

There is a real need for the establishment of closer affiliation between students and physicians in private practice, and this paper provides reasons for such liaison.

The medical student usually arrives at medical school with little worthwhile knowledge about the medical *profession*. He knows what the American Medical Association is, but he really has a very limited idea about what it does. He carries many misconceptions about the AMA—its organization, its policies, and its purposes. The most common concept among such students is that the AMA is a powerful political lobbying organization which is concerned with nothing except self-serving interests. This picture is limited, unrealistic, and in need of constructive change.

Because of his relative ignorance about the AMA in particular and about organized medicine in general, the student often develops an attitude which may be characterized as being "anti-AMA." Remember the student has just arrived in the medical environment—he is still most closely allied with those attitudes prevalent in society in general and on his undergraduate campus in particular. He has the attitudes of the health care consumer. Unfortunately many of these attitudes hold medicine in disfavor



—not the individual family doctor, but medicine and doctors in general. And if anything, his feelings on this subject have been heightened by his undergraduate college experience. The reasons for the effect of the undergraduate college experience are obvious when seen in the context of the generally more liberal attitude so much in evidence on the nation's campuses today. It simply appears to be the way thought is being channeled in this environment of such great peer group pressure for conformity.

I am not saying that students admitted to medical school are of the type we see engaging in destructive behavior, but there is a general undertone of greater liberalism in the attitudes, thinking, feeling, and conversation of the students more recently admitted than there was even two years ago. These students are largely responsible citizens. The point toward which it seems we must direct our attention and efforts is that we have a large number of students with little knowledge about organized medicine. These newer students usually are not violent or vocal in their opposition to organized medicine, but we all are aware that the vocal may lead others simply because they hit one or two chords of response in a myriad of issues, or because they are organized and have a plan or cause.

Education and re-education are the only weapons organized medicine can muster against such attitudes, and this instruction clearly cannot be contained in the regular curriculum of the medical school. I would suggest our first efforts be toward public re-education, and the education of medical students by the local medical societies in any effective way they can originate. The efforts in public education are far beyond the bounds or intent of this paper, but they are the more important issue. My comments will concern efforts that are feasible on a local level with that segment of the population which is most important to the future of organized medicine—the medical student.

The problem of educating the individual medical student in the positive aspects of organized medicine and the AMA is not as easy as it might appear at first glance. First, there is tremendous resistance to be over-

come in the attitudes of society which the student has for twenty or more years been absorbing. Second, the student is educated in such a way that the most prevalent attitudes with which he will come in contact are those of persons who usually have never engaged in the private practice of medicine. Those attitudes opposed to organized medicine seem to be the most frequently and vocally expressed. Those persons with positive attitudes feel no need to evangelize—unless they feel threatened by the wave of negativism—and, therefore, positive argument may be left unheard.

It is my strong belief that close liaison should be established between the medical student and the individual engaged in the private practice of medicine. There are many advantages to be accrued from such a close liaison and I think the great importance is the benefit which may be derived from the interchange and exchange of attitudes and philosophy.

Our profession has for too long been on a downhill trend toward deep, ideological division. The prospects are that this trend will accelerate rapidly if decisive action is not taken soon. The profession, the state, and the nation cannot afford the luxury of such division. We must be brought together. I believe we can achieve this rapidly and simply through a program of increased exposure of students to private practitioners and vice versa. Increasing this exposure through some kind of membership in the state medical association seems to be the most practical, especially in view of the already existing good relationship between the students and the state association in Oklahoma. We have enjoyed excellent cooperation with one another in the past—it has been an open, two-way street. Let this continue in the future.

An additional point I would like to make is one of amending Mr. Derry's thought quoted at the beginning of this paper. Mr. Derry feels that admitting students to the state medical society with full rights and privileges would "deal more with the actual problems of private practice than the problems of organized medicine." I believe students should be involved in *both* these areas, for it will be only through exposure to the issues confronting organized medicine and



to the philosophy of those now actively involved in such organization that the student can glean an appreciation of the reasons for past and present action—action which is so often misrepresented by the press and by the public.

There should be no reason why students should not be considered for positions on committees after appropriate motivation has been ascertained and after appropriate ground rules have been established and understanding attained. In fact, this move might reap a double reward. Not only would the student reap the benefit of exposure to the issues and the other members gain insight into what might be a refreshing, new, and compatible view, but student membership just might serve as a powerful stimulus to involvement of many inactive or not-so-active older members.

Students will have time to devote to this new activity and it will be more relative under the new curriculum which has been evolved at the University of Oklahoma. I would think it safe to assume that the local SAMA chapter would guarantee active student participation in any such program. It would be even more constructive if this program involved interns and residents as well.

We should not dodge the issue that there is a great deal of turmoil in our country's educational institutions nor that there is much ideological turmoil within the Student American Medical Association. The emotionalism mobilized against those groups of students all too evident on evening news broadcasts has been transferred to all students and to the medical students here. My plea is that you, the private practitioners, should get to know more about SAMA, students, interns, and residents. There are conservative students present on campus too, and they do exert an influence—not as spectacular an influence as more violent students perhaps—but an influence nevertheless.

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*Herbert W. Truett, Jr., M.D., graduated from the University of Oklahoma School of Medicine in 1969 and is presently taking his internship at St. Francis' Hospital in Tulsa. He is a member of the Student American Medical Association, the American Academy of General Practice and the Southern Medical Association.*

Most students are responsible. There are those of us who call ourselves activists who are working for responsible, significant, just change in medical education and in medicine. These changes should benefit everyone including the practicing physician. We may not be as vocal, but we are nonetheless present and need encouragement! The problems facing medicine today need all the willing hands available, and the practicing physician too often has been left out of the recently initiated planning efforts for the future.

The only true understanding we can reach among ourselves is that derived from hearing both sides of a story, and we all consider it the mark of a mature individual that he bases his decisions on a carefully considered evaluation of all facts—not just half of them.

Students could be made associate members in the state medical association. This is the policy followed in Georgia. In this more appropriate relationship the physician could grow to appreciate the student as an individual and not as the destructive element so much in evidence on the television screen. At the same time the student could grow to appreciate the practicing physician as an individual in quality practice and not as the mistake-causing "LMD" who is so often hailed as the picture of the average individual in private practice.

The practicing physician could serve a powerful and much needed teaching role in his office by offering instruction to the student in the ethics and the medicolegal aspects of medicine—since these aspects of medical training are very inadequately presented in formal education today. Students, by and large, hold in high esteem the man who has been in practice and who is available to them in a teaching situation. It is a tragedy that there are not enough of these individuals.

There is simply too much isolation of the student from the practicing community during his formal medical education. A two month preceptorship is not enough. There should be more emphasis on students, residents, and interns having exposure to the practicing physician's office. The experience is totally different from medical school environment and the picture of the patient and



the common diseases encountered in private practice is one to which few medical students have been exposed.

The final and most important concern I have is that too often, during the initial phase of medical training, we overlook the fact that the medical student is an adult with the capacity to act maturely. These young men and women have been through four years of college and are, in more ways than one, the cream of the crop. Admittedly they

have a long way to go in their quest for knowledge about medicine's scientific and professional aspects, but somewhere a beginning must be made. The earlier that beginning is made toward *professional* maturity and independence, the better it will be for all persons involved. Let us actively pursue a closer liaison by student membership in organized medicine. Let us go forward together; forward—to greater understanding, to greater cooperation, to better professionalism—together. □

## EMERGENCY MEDICAL IDENTIFICATION

Soldiers aren't the only ones who wear dogtags. Tags are the fashion for the 40 million people who have medical conditions which need special attention in an emergency.

The plastic or metal tags, called emergency medical identification signal devices, are worn around the wrist, ankle, or neck. On one side of each tag is the universal symbol—devised by the AMA—which indicates the presence of vital medical information. The information is printed on the other side of the tag: The wearer's medical condition and sometimes the name and phone numbers of his nearest of kin and personal physician.

Some people who should wear emergency medical identification are: Diabetics, whose insulin needs may be overlooked during an accident or whose insulin reaction may be mistaken for drunkenness; epileptics, who are sometimes unnecessarily hospitalized during seizures; neck breathers (those with a tube surgically inserted below their "adams apple"), who can be smothered during emergency treatments; people with regular needs for prescribed medicine, who might miss a dose during unconsciousness; persons with drug allergies, who may suffer severely if treated with the wrong drug.

These signal devices are distributed and sold by a variety of firms and organizations. Many pharmacies carry them as regular items.

An emergency medical identification card is now available from the American Medical Association. The card gives a place for the name, address, name of the physician, and date of the last tetanus immunization. These cards may be ordered by physicians from the AMA, Order Handling Unit, 535 N. Dearborn Street, Chicago, Illinois 60610.



# *William Osler (1849-1919); Book Lover and Writer*

R. PALMER HOWARD, M.D.

*The many-sided fame of the ideal physician lives on today, especially through "A Way of Life," "Aequanimitas," and his other essays.*

**W**ILLIAM OSLER, the son of a frontier clergyman and his resolute understanding wife, was born at Bond Head on the frontier north of Toronto, Ontario, on July 12, 1849. He was named William because on that day the village was celebrating the anniversary of the Battle of the Boyne in which William of Orange's Protestant forces gained a victory over the "Green" in Ireland. Osler's destiny was to be the beloved physician of his age. He inspired his associates, students, patients and friends wherever he encountered them. The bonds were lasting through his lifetime and that of his acquaintances too. His influence on members of the medical and allied professions was indeed a "potent ferment" and burnt deeply into the hearts of those who knew him. Through their spoken tributes and his own deeds and writings, Osler's name is engraved with honor on the minds of untold numbers in the succeeding generations of men and women.

Let me give you some examples from the written testimony of those who knew Osler at various stages of his medical career. The

first use of the appellation "potent ferment" in Cushing's *Life of Sir William Osler* may be found in a letter to Osler from the Professor of Medicine and Dean of the McGill Medical Faculty, R. Palmer Howard. This was written in the summer of 1884 from Canada while Osler was visiting Europe, and it was prompted by the news that he was considering the Professorship of Clinical Medicine at the University of Pennsylvania. Incidentally, the McGill school offered to raise Osler's annual salary to \$1,500. The letter continued:

. . . Now as to the other part of it I don't know how to speak my own sentiments and those of the entire Fac.; the thought of losing you stuns us, and we feel anxious to do all that we can as sensible men to keep you amongst us, not only on account of your abilities as a teacher, your industry and enthusiasm as a worker, your personal qualities as a gentleman, a colleague and a friend; not only on account of the work you have already done in and for the school, but also because of the capabilities we recognize in you for future useful work, both in original investigation which shall add reputation to McGill and in systematic teaching of any of the branches of Medical Science you may care to cultivate; and finally because we have for years felt that vitalizing influence upon us individually exercised by personal contact with you—analogueous to that produced by a potent ferment.<sup>1</sup>

Despite the hopes of his McGill friends, Osler left Montreal to spend five productive years in Philadelphia where William Pepper held the Chair of the Practice of Medicine at the University of Pennsylvania. The invigorating spirit of Osler was quickly appreciated by a host of medical and other professional men in Philadelphia. One of

Presented before society meetings in Oklahoma City and at the Hixon Hour, University of Kansas Medical Center, Kansas City, December 15, 1969.



them compared his influence to that of another transplant from the north, in that instance, Benjamin Franklin from Boston.<sup>2</sup>

In Philadelphia and later in Baltimore, where the innovation of a revolutionary type of medical school at Johns Hopkins produced apprehension and jealousy among the faculties of the weaker proprietary schools, Osler frequently took firm stands in delicate professional issues. Yet he did so without stirring up controversies. The medical historian Fielding H. Garrison wrote:

. . . What made him, in a very real sense, the ideal physician, the essential humanist of modern medicine, was his wonderful genius for friendship toward all and sundry; and, consequent upon this trait, his large cosmopolitan spirit, his power of composing disputes and differences, of making peace upon the high places, of bringing about "Peace, Unity, and Concord" among his professional colleagues. "Wherever Osler went," says one of his best pupils [William S. Thayer], "the charm of his personality brought men together; for the good in all men he saw, and as friends of Osler, all men met in peace."<sup>3</sup>

Osler's greatest contribution to American medical education came after 1889 when Halsted, Kelly and he organized the professional staff of the Johns Hopkins Hospital. These three men developed the prolonged clinical training of young resident physicians. William H. Welch, who shared so prominently in planning and developing the Hopkins Medical School and, like Osler, had broad cultural and educational interests, wrote in 1926:

. . . Osler's most important contribution to the system of medical education was the organization and development at Johns Hopkins of a medical clinic, truly deserving of the name. . . . In the clinic [medical] students were practically trained, disease was studied . . . in a truly scientific spirit, and over all was the guiding hand and the inspiring example of the 'Chief.'<sup>2</sup> (pp. iv-v)

John F. Fulton of Yale and William W. Francis of McGill emphasized the appeal of Osler to the new generation in the medical profession. Their preface to the 1940 re-issue of Cushing's biography included these words:

. . . The appeal is not entirely spiritual; rather it is pragmatic, for he discovered a way of life which, if followed, leads to positive accomplishment. . . . The experiences in the dissecting room, in the dead house, and with sick people are in any age the common bonds of a medical student's life, and they have never been more compellingly

portrayed than in Cushing's biography of Osler. But behind them all come two messages: one, that the gruesome phases of medical training and medical practice need never be repulsive or depressing if they are leavened by Osler's broad humanity, his love of life and literature; and the second, that the master-word in medicine is work.<sup>4</sup>

The "Great Physician's" kind humanity to every poor and ill person shines through the sensitive biography by Edith Gittings Reid. This talented woman, as I understand, first watched Osler as a powerless doctor but loving friend of her child who finally succumbed to an incurable disease. Mrs. Reid poignantly portrayed this aspect of Osler's personality as follows:

. . . Only Dickens could have been one with him with children or in the wards of the poorhouse, sitting beside the down-trodden, the lowly and the suffering. Only Dickens could have measured comprehendingly the sweetness and tenderness of the great heart of a child in the brilliant man, making all his rich endowment merely a setting for his humanity.<sup>5</sup>

Osler's fame as the leading physician of his time spread east and west even to areas he had never visited. In Oklahoma City, the prominent physician and historian, Lewis J. Moorman, was instrumental in naming an office building after Osler, and he referred to him several times in *Pioneer Doctor*.<sup>6</sup> Moorman felt deeply honored when asked to deliver the address, "Osler, the Man," before the Osler Club in London in 1949.<sup>6</sup> (pp. 233-236),<sup>7</sup> Professor Ralph H. Major of the University of Kansas knew Osler intimately, and both he and the late Logan Clendening made Osler

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a familiar name in the heartland of the midwest.

Osler's fame today may be ascribed to many things, including his writings and his love of books. *The Principles and Practice of Medicine* in 1892 established his pre-eminence as a medical writer.<sup>8</sup> This book rapidly became the standard text on internal medicine for students and practitioners in the English speaking world, and its influence spread wherever the original or translations could be read. Osler's addresses, such as "Aequanimitas," "A Way of Life," "An Alabama Student," "The Master-Word in Medicine," and many others, have moved his hearers and readers up to the present day. Their literary quality is high. The insights into the meaning and purpose of life in this world and the unknown hereafter lead and encourage many to walk briskly forward.

William Osler read greedily from his early years. The Bible, the classics, biographies, scientific and medical books he devoured, loved, absorbed, and aptly quoted in his own writings. His teachers, William A. Johnson at Trinity College School, James Bovell at the University of Toronto, and R. Palmer Howard (1823-1889) at McGill University, gave him free access to their personal libraries. Reading together cemented friendships between pupil and these teachers. Osler always revered them, and to them he dedicated his famous textbook of medicine.

Osler's love of books led him not only to advise reading and collecting books, but also to select appropriate gifts for his friends and students and the medical libraries, which he frequented and fostered. Libraries in Toronto, Montreal, Philadelphia, Baltimore, Oxford, London, and many other cities, received gifts of valuable books and, perhaps more importantly, stimulation and encouragement to expand and improve their holdings and their professional services.<sup>9</sup> Osler nominated Miss Marcia Noyes as the first librarian to the Maryland Medical and Chirurgical Faculty (Society) in Baltimore. With Miss Noyes, Miss Margaret Charlton, librarian at McGill, and Doctor George M. Gould of Philadelphia, Osler was a driving spirit in the founding of the American Medical Library Association.<sup>1</sup> (vol. 1, pp. 468n, 551), 10 Osler's stimulating influence to elevate the standards of the professional librarian and

to improve the holdings continued in Britain. In his Presidential Address at the first Medical Library Association meeting in Great Britain in 1909, Osler stressed the importance of the medical library in postgraduate work.<sup>11</sup>

To start his own collection as a young man, Osler bought a one-volume Shakespeare and Sir Thomas Browne's *Religio Medici*, both of which remained his friends throughout his life. He recommended these and eight other books for the bedside library of every medical student:

. . . I have put down a list of ten books which you may make close friends. There are many others; studied carefully in your student days these will help in the inner education of which I speak.

- I. Old and New Testament
- II. Shakespeare
- III. Montaigne
- IV. Plutarch's Lives
- V. Marcus Aurelius
- VI. Epictetus
- VII. *Religio Medici*
- VIII. Don Quixote
- IX. Emerson
- X. Oliver Wendell Holmes—Breakfast-Table Series.<sup>12</sup>

His private collection was never neglected, but it engrossed much of his talent and time during the Oxford period. He outlined the arrangement and the annotations for the catalog, the *Bibliotheca Osleriana*, which was completed through the efforts of W. W. Francis, his cousin; R. H. Hill, librarian at the Bodleian, and Archibald Malloch, subsequently librarian, New York Academy of Medicine.<sup>13</sup> Osler bequeathed his outstanding collection of 7,784 items of historical significance from the classic to modern periods to the medical school of McGill University where it forms the nucleus of the Osler Library.

Thomas McCrae, a former student and co-author of *A System of Medicine*<sup>14</sup> and later editions of the textbook, wrote an analytical appreciation of the library and the catalog. He pointed out that the *Bibliotheca Prima* was arranged by Osler in chronological order to show the most important contributions to science and medicine from Hippocrates through Röntgen. These 1,702 items illustrated the contributions of 67 prominent writers but, of course, other medical historians could not be expected to agree with the author's choices in every instance. Mc-



Crae stressed that every practitioner should strive for more learning in depth, and he reflected that even Osler found time to spare from his many professional responsibilities.<sup>15</sup>

As a further comment on the *Bibliotheca Osleriana*, the dean of medical history in America, William H. Welch, wrote:

There are perhaps no two physicians in history whose spirits were more akin to Osler's than Conrad Gesner and Boerhaave. In admitting Gesner to the choice company of Leonardo, Paracelsus, Copernicus, Vesalius, Paré, Agricola and Gilbert, the only others selected to represent the sixteenth century in the *prima*, Osler is quoted as having remarked to a friend: "I am not sure that this fellow should go into *prima*; but I love him so much that I must put him there. Besides, he is the father of Bibliography." Who could be critical after reading such a confession, especially when he recalls Henry Morley's characterization of Gesner, which is almost a portrait to the life of Osler himself?: "Conrad Gesner, who kept open house . . . for all learned men who came into his neighborhood . . . was not only the best naturalist among the scholars of his day, but of all men of that century he was the pattern man of letters. . . . But still, while finding time for services to other men, he could produce as much out of his own study as though he had no part in the life beyond its walls."<sup>2</sup> (pp. ix-x)

Osler's abilities as a classicist and as a bibliographer were recognized by his prominence in the British societies in these fields. The first physician to be elected president of the Classical Association, Osler read "The Old Humanities and the New Science" in May, 1919, to an appreciative audience.<sup>16</sup> His presidential address to the Bibliographical Society on January 19th, 1914, in London was published posthumously in 1923 as *Incunabula Medica . . . 1467-1480*.<sup>17</sup> The study of the latter book during a short trip to Oxford and London in the summer of 1968 led me to Bartholomaeus Anglicus' *De proprietatibus rerum*.<sup>18</sup> This one-volume encyclopedia was written about 1250 A.D., but remained popular for many centuries. The question struck me whether or not Osler's influence might last as long.

The *Bibliotheca Osleriana* strengthened my interest in *De proprietatibus rerum* (On the Properties of Things), not only by its inclusion of a fine Latin edition (Lyon, 1482), but by the reference to the English translation as "Shakespeare's Encyclopedia."<sup>13</sup> (p. 632) I studied this medieval work

in manuscripts and printed texts at the Bodleian Library in Oxford; several libraries in London; the Osler Library of McGill University; the Clendening Library of the University of Kansas Medical Center, and the University of Oklahoma Library at Norman. According to Professor Duane H. D. Roller, the emphasis of the History of Science Collections at Norman is on books about the history of the physical, biological and earth sciences. The collection contains three Latin editions of *De proprietatibus rerum*, including the rare Lyon 1480 edition (H. C. 2500).<sup>19</sup>

Several medical historians in America have paid attention to Bartholomew, but none more so than James Jerome Walsh. His annotated rendering from the Wynkyn de Worde printing of Trevisa's English translation has made the medieval friar's medical writings available to all.<sup>20</sup> Although Bartholomew's book contributed no original scientific ideas, its wide popular appeal persisted for more than three centuries. As a source of "natural history" it was quoted by many, including William Shakespeare, until European minds awakened by new knowledge turned away from these ancient dogmas.

The pupils of William Osler will soon disappear from the face of this globe. His influence, however, will endure in the medical schools, hospitals, libraries and research institutes. Teacher, writer, book lover, leader of men, skilled physician, all these will be remembered. The influence of the *Principles and Practice of Medicine* on the medical profession surpassed that of Bartholomew's book, although the latter had a long life. The production and dissemination of new information are now so rapid that one must agree with Welch that Osler's diagnostic and therapeutic works will prove ephemeral. Welch predicted, however, "that history will preserve Osler's fame as a serious and scholarly student of medical history and as a bibliographer as only second to his reputation as a great clinical teacher. Possibly, being based more upon written records than upon tradition, it may be more enduring."<sup>2</sup> (p. vii)

William Osler died at Oxford on December 29th, 1919, and was buried on New Year's Day. The heart-wringing final paragraph in Cushing's *Life* illustrates Osler's appreciation of the great masters whom he revered;



his teachers and professional brothers with whom he shared respect and friendship; and the younger men, his own pupils and others joining this noble profession, whom he loved as though they, too, were brothers of his deeply, mourned son Revere. Cushing omitted Sir Thomas Browne's name from this list, but Osler's copy of the beloved *Religio Medici* lay on the bier.

. . . And perhaps that New Year night saw, led by Revere, another procession pass by the 'watching-chamber'—the spirits of many, old and young—of former and modern times—of Linacre, Harvey, and Sydenham; of John Locke, Gesner, and Louis; of Bartlett, Beaumont, and Bassett; of Johnson, Bovell, and Howard; of Mitchell, Leidy and Stillé; of Gilman, Billings, and Trudeau; of Hutchinson, Horsley, and Payne; of the younger men his pupils who had gone before—Jack Hewetson, MacCallum, and McCrae; and in still greater number those youths bearing scars of wounds who more recently had known and felt the affection and warmth of the 'Open Arms'—doubly dead in that they died so young.<sup>1</sup> (vol. 2, p. 686)

For many years tributes to Osler have poured in from Canada, United States and England. Those of S. Adolphus Knopf,<sup>21</sup> Lewellys F. Barker,<sup>22</sup> Sir Humphry Rolleston,<sup>2</sup> (p. 347) and Sir Arthur S. McNalty are examples from the numerous noble expressions. Twenty years ago MacNalty wrote:

. . . I am not aware of any physician who has been so widely known and loved. A physician of two continents, in his life-time he had countless friends and not one enemy. He was specially kind to his students, helping and encouraging them as they set their steps on the arduous path of medicine. He was a great teacher and a great clinician. He made every use of his splendid opportunities, not to his own self-glory but for the good of his fellow mortals and the advancement of medicine. If professorial and professional duties and a thousand calls on his time prevented his making any outstanding discovery, he possessed in the highest degree the wonderful gift of inseminating knowledge and an aptitude for research in others.

. . .<sup>23</sup>  
Osler's influence persists today in many different ways among the intellectual sons and grandsons of the great physician-teacher. His writings on the way of life of the medical student and practitioner are ac-

knowledgeed as literary masterpieces. I believe these essays will carry William Osler's name on to future generations as the ideal physician of the practice of medicine in this era.

# ACKNOWLEDGMENTS

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## CALHOON TAKES OSMA LEADERSHIP

Ed L. Calhoon, M.D., Beaver, Oklahoma, took over as President of the Oklahoma State Medical Association on Saturday evening, May 16th, during the association's annual meeting. In

He is past-president of the Oklahoma University Medical School Alumni Association and a member of the Board of Directors of the Oklahoma Medical Research Foundation. He serves on the Advisory Council of the Oklahoma Regional Medical Program and is a member of the Oklahoma Blue Shield Board of Trustees.

An active layman in the Methodist Church, Doctor Calhoon is Regional Director of the Oklahoma Cancer Society and has served on numerous councils and committees for the state medical association.

A graduate of Northwestern State College in Alva, Doctor Calhoon served in World War II before entering medical school.

The doctor and his wife, Felice, have two children, Scott, a sophomore at Oklahoma City University in premedicine, and Lane, a fourteen-year-old daughter. □

ED L. CALHOON, M.D. accepting the presidency from Hillard E. Denyer, M.D., Bartlesville, Calhoon became the sixty-fifth president of the OSMA since its incorporation in 1906.

Doctor Calhoon is in the general practice of medicine in Beaver and specializes in general surgery. A 1951 graduate of the O. U. School of Medicine, he is a member of the Board of Regents for the Oklahoma College of Liberal Arts, Chickasha, and a member of the Board of Trustees for Northwestern State College in Alva.

## CALHOON NAMES COUNCILS AND COMMITTEES

Ed L. Calhoon, M.D., President of the Oklahoma State Medical Association, has released a tentative list of his appointments to the OSMA Councils and Committees.

Standing committees and councils are established in the OSMA Bylaws, while special

committees are designated by the President to carry out specific functions under the jurisdiction of appropriate councils.

Ramaining appointments will be completed within two weeks, Doctor Calhoon said.

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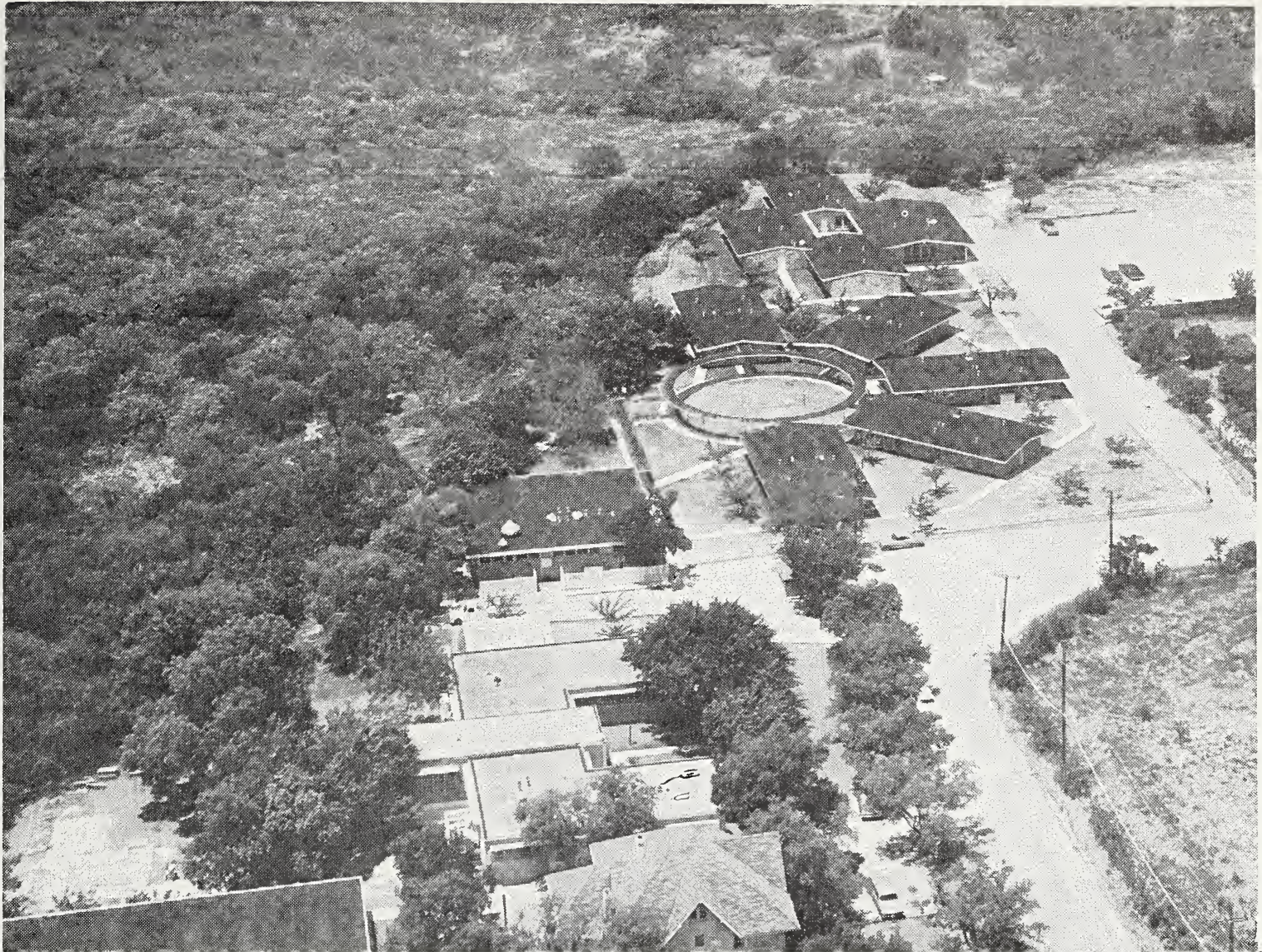
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## Finch Proposes Medicare-Medicaid Changes

HEW Secretary Robert H. Finch has announced the submission to Congress of radically new Medicare and Medicaid legislative proposals. The key provision in these new proposals is a request for legislative authority for the government to enter into "health maintenance contracts."

The proposed legislation has been submitted only to the House Ways and Means Committee, which has been holding executive sessions on social security legislation, including Medicare and Medicaid. Since the Finch proposal gives HEW's thoughts and plans, his statement is reprinted in full below.

### Medicare-Medicaid Reform Statement

The Federal government is spending over \$10 billion this year to buy health care for the aged and the poor under the Medicare and Medicaid programs. This is double what was estimated when these programs were enacted in 1965, just five years ago. In another five years, given the present trend the cost will be at least \$20 billion.

We are not getting our money's worth. The aged and the poor are not getting all of the care they need.

The average citizen loses on two counts:

—He is paying an increasing share of taxes to support this expenditure, without seeing the desired results for it.

—He is paying higher medical bills in part because his government has increased the demand for medical service without increasing the supply and without improving the operation of our fragmented and inefficient health care industry.

The Nation as a whole loses from the inflation of health care costs. Such inflation, given the urgent need to control overall government spending, means fewer dollars to expand other needed health activities.

—To improve the efficiency of the health care system.

—To increase the number of doctors and other health personnel needed to meet the expanding demand.

—To fight pollution and other environmental factors affecting health.

—To increase medical research.

The question is not one of placing blame but of recognizing our difficulties and acting on them. Medicare and Medicaid were built on the traditional arrangements for organizing, delivering and paying for care that prevailed when those programs were enacted. They placed added and unanticipated stress on a health system which was fragmented, and unprepared to respond. Last year Doctor Roger Egeberg and I directed the Nation's attention to this situation and called upon all segments of the health community to make drastic changes in our outmoded and fragmented medical care systems.

There have been encouraging responses. Medical societies are beginning to experiment with offering services to the poor at guaranteed annual rates and reviewing the practices of their members to prevent abuses. Medical schools are looking for ways to expand their enrollment and develop paramedical workers. The new generation of medical students is involving their schools in the problems of the inner-city and the rural poor. Hospitals are establishing satellite health centers in neighborhoods that have had no facilities and are expanding out-patient services in order to keep people out of the hospital. Insurance companies are going beyond their traditional role of paying bills to concern themselves with problems of providing health services.

But these efforts are still few and scattered and they have brought into starker view the size of the job before us.

Consider the current symptoms:

—Costs of hospital care are still rising at 13 percent per year, more than twice the rate of other parts of the economy.

—One dollar out of every fourteen spent in the national economy is going for health. This is a higher percentage than in any other major nation in the world.

—The Federal government is rewarding inefficient hospitals by reimbursing all hospitals on a cost

basis.

—Doctors and other medical personnel are badly overworked, many of them laboring an average of 70 hours a week or more, often doing jobs that others could do if our health industry were better adapted to modern needs.

Our goal must be to reverse this process of growing expenditures without corresponding increases in health care. This means working toward a system where the doctor is rewarded financially for keeping the patient healthy, where the hospital is rewarded for efficiency and can invest cost savings in improved services, where the doctor and hospital together are rewarded for efficient use of manpower, and, where the health consumer, the individual or the Federal government, has a choice between competitive alternatives when he buys health care.

As the biggest purchaser of health care in the world, the Federal government has an obligation to encourage development of a more responsive health care system for the nation. It will be a long process but we must start now.

We are pleased that the House Committee on Ways and Means and the Senate Committee on Finance have begun hearings in this important area. We propose the following steps, as outlined this week by Under Secretary John G. Veneman in executive sessions of the Ways and Means Committee.

—To initiate a series of measures, some of which have already been announced, aimed at controlling the costs of Medicare and Medicaid and encouraging better distribution of health facilities.

—To begin redirecting our Medicare and Medicaid expenditures, through the use of health maintenance contracts, toward developing an increasingly efficient and competitive health care industry that can serve all Americans better.

### I. Planning and Cost Control Measures *Facilities Planning*

We wish to assure the orderly expansion and improvement of health care facilities while avoiding costly duplication. We are requesting au-



thority to withhold amounts for depreciation and interest related to capital expenditures under Medicare from those health care institutions that make major capital expenditures that are disapproved by local and state planning bodies.

#### *Medicare Experiments*

We are proposing that the Medicare program be given greater opportunity to conduct areawide experiments and demonstration projects in the use of financial incentives that offer promise of promoting increased efficiency and cost control.

#### *Utilization Review*

We must assist the medical profession in controlling excessively long hospital stays and other forms of over-utilization. We are, therefore, proposing improvements in existing hospital utilization review procedures by physicians, and experiments with new and alternative kinds of medical and utilization review mechanisms, such as the application of computers and related technology in the utilization and medical audits.

#### *Correction of Abuses*

We are asking for authority to terminate payments for services rendered by health care suppliers found guilty of program abuses, and to facilitate recovery of overpayments.

#### *Prospective Reimbursement*

Under the present Medicare legislation, reimbursement for hospital services to Medicare beneficiaries is provided on the basis of cost. There is little incentive under retroactively determined cost approaches to produce the services in the most efficient manner. We propose now to move to a required method of determining reimbursement rates on a prospective basis to encourage institutions, through financial incentives, to operate efficiently and to require that they bear the risk of incurring higher costs than contemplated.

#### *Professional Fees*

We propose that Medicare's recognition of increases in fees of doctors and other professionals be limited so that such increases do not occur at

a rate greater than that for prices generally. Under such an approach, allowable charges recognized for Medicare would next year generally be limited either to presently recognized charges or to a new prevailing level set at the 75th percentile of 1969 average customary charges for a given service in an area. In the future, the reimbursable charges would move upward in proportion to relevant increases in appropriate wage and price indices. This is basically the same approach we have already instituted in Medicaid.

#### *Medicaid Reimbursement Changes*

In the economy message sent to the Congress on February 26th, the President suggested changes in the Federal matching percentage for medical assistance that would encourage States to substitute less expensive care for more expensive care when it is equally beneficial. The President's proposal provides for increased matching to encourage use of outpatient health services and for decreased Federal matching to discourage States' use of institutional services that are largely custodial.

#### *Medicaid Improvement Program*

Ultimately the structure of the Medicaid program must be extensively improved. Before changing the nature of the program, we need to gain experience with different approaches to benefits, eligibility, prepayment and administration.

To test a variety of approaches to these problems, we are requesting authority to conduct experiments with the States on a statewide, area-wide, county, city or neighborhood basis.

#### *Medicaid Standards*

We propose to give the State health agencies responsibility for establishing and maintaining health standards for institutions in which Medicaid beneficiaries receive care and services.

We are also requesting authorization for Federal payment of 90 percent of the costs incurred by the States in the design, development and installation of computerized claims processing and information

systems as well as systems to review claims and utilization.

## **II. Redirection of Health Delivery— Health Maintenance Contracts**

We have already submitted to the Congress measures to improve the delivery of health services. These include the Health Facilities Construction Act of 1970, which is concerned with needed innovations in the development of facilities, and the Health Services Improvement Act of 1970, which will provide needed improvement in the planning, coordination, and organization of health services.

Today we propose an even more fundamental change. We are asking for authority, under the Medicare and Medicaid law, to enter into health maintenance contracts guaranteeing health services for the elderly and the poor at a single fixed annual rate for each person served. The interests of all parties, the contracting organization, the person who chooses such services and the government will be the same:

- to see that all possible steps are taken to prevent sickness, such as periodic examinations and appropriate immunizations;
- to treat illness as soon as possible to prevent it from becoming more serious;
- to avoid unnecessary hospitalization;
- to provide a full range of services from a single source in a coordinated efficient manner.

In the case of Medicare, the patient will be entitled under such a contract to all of the usual Medicare services plus preventive services. The contract price will be negotiated in advance at an amount less than the Social Security Administration presently pays for conventional Medicare benefits in the locality.

Similarly under Medicaid we are seeking authority for the States to offer to the poor the option of securing services under such health maintenance contracts. We propose to work with the individual states toward the modification of their present programs in this regard and to encourage their use of the experimental authority previously men-



tioned for the testing of a variety of different contractual arrangements.

The cornerstone of this new option in Federal health purchasing will be the opportunity for consumers to choose between alternatives. The ultimate goal will be to give every beneficiary of these programs a choice between obtaining services from a health maintenance organization or arranging for them in the usual way from individual doctors and hospitals. He will have the choice of withdrawing from enrollment in a health maintenance organization if he finds the service unsatisfactory. The government will have the choice of entering into arrangements with individual health maintenance organizations, subject to special standards including assurance that every contractor will serve persons of high medical risk as well as the healthy.

No organization would be given an exclusive franchise to serve Medicare or Medicaid clients. In order to attract consumers, the health maintenance organization will have to compete with other potential organizations, doctors and hospitals.

Safeguards would be necessary to assure the dissemination of reliable information about the various health maintenance organizations—the benefits they provide, their service areas, enrollment procedures, and other pertinent information—so as to assure that each individual would be able to make an informed choice among alternatives available to him. Similarly, the Government would assure the continued maintenance of high standards for health and safety.

Through such legislation we hope to accelerate the coming of a new era of diversity and competition for health care in the United States, based on informed consumer choices and private incentives that operate within the framework of Government safeguards.

More than five million people in the United States are presently getting medical care under arrangements which include financial incentives to keep the patient healthy and

out of the hospital. Virtually all members of a county medical society in Oregon have joined together with local hospitals to provide health maintenance contracts for the poor. In a newly developed model community, a distinguished medical school and an insurance company have teamed up to build a health maintenance organization for the entire population of that community. One of the country's largest corporations has sponsored for many years a non-profit foundation which now guarantees comprehensive health services at a fixed annual charge for almost two million persons.

The kind and variety of arrangements which are possible go far beyond these beginning efforts. Some health maintenance organizations may be large corporations. In contrast, a group of doctors may elect to combine for this purpose for part of their time and continue their conventional medical practice as well. An existing hospital may combine with its medical staff to form such an organization, or it may develop arrangements with others and subcontract its services at a fixed rate.

We recognize that health maintenance organizations do not now exist in every American community. In fact, some States have laws prohibiting the practice of medicine in this fashion. We propose to use the economic leverage of the Federal government to encourage the States to remove these barriers. It is the goal of this Administration to encourage a more efficient medical care system and the proposals the Administration is making today would stimulate physicians to align themselves into groups to practice more efficiently. The process may take many years but we need to begin now to build into our health industry the seeds of continuing renewal.

The essential point is that the Federal government begin to deal with the health industry as a cohesive whole. We will not prescribe the form of a health maintenance organization but we will be concerned about the result it produces, much as we are concerned that those selling

cars to the Federal government produce a quality product. Under such contracts we will not pay separately for a specific surgical procedure, or a doctor's visit, any more than we pay separately for the essential parts of a car. We will be interested in delivery of an entire product, a guaranteed package of health benefits of high quality, and assurances that the organization can supply that product. The contract will provide a set price per person per year. Savings through efficiencies consistent with quality care will go to the organization and to the consumer, and the organization will assume the risk of any losses.

In summary the several pieces of legislation we have now recommended to the Congress are integral to an effective and reasonable overall approach to meeting the health care needs of the American people. Obviously, the Federal government by itself cannot and should not direct the health care delivery system. We need to develop, in partnership with the private sector, a more effective climate in which private institutions can go about improving the present system of organizing and delivering services. □

## Faculty Members Available for Scientific Programs

The University of Oklahoma Medical Center Faculty is frequently called upon to participate in scientific programs around the state. In order to clarify and extend the usefulness of the medical school, a source of speakers for programs throughout the state has been compiled and appears on perforated pages xlv-1 of this issue of *The Journal*.

Except in unusual circumstances, university funds are not available for this purpose. Hence, it is expected that local groups will defray the travel expenses of their guest speakers.

County society presidents or program chairmen are urged to tear these pages from *The Journal* and file them for use in planning future programs. □



## Physician's Income Report Subject

Between 1945 and 1966 gross income for physicians in solo practice went up 207 percent. This figure comes from a recently published study compiled by the Department of Health Education and Welfare entitled *Studies of the Incomes of Physicians and Dentists*.

Although the data in the report are from 1945 through 1966, they represent the most detailed statistics of this nature ever published. Basic data were compiled by HEW from income tax returns to the Internal Revenue Service.

The study shows that the average solo practitioner in 1966 had a net income of \$23,922. In that same year the average net income for an Oklahoma solo practitioner was \$25,266.

A surprisingly large number, 8,744 physicians, reported no net profit from their solo practice.

Physicians in partnership fared somewhat better than their colleagues in solo practice. The partnership physician averaged \$31,257 in net income on a nationwide basis, but only showed \$29,466 for Oklahoma.

While 39.9 percent of the solo practitioners income was being used for his expenses and overhead, the partnership was using 42.2 percent of the gross income. Nevertheless, net income per physician in partnership was substantially higher. Furthermore, a smaller percentage of partnerships failed to show a profit.

While the physician's net income has increased 215 percent over the period 1945-1966, the cost of living increased 80.4 percent as measured by the consumer price index. This means that the "real" income of physicians, measured in relation to their purchasing power, has increased approximately 75 percent.

While the physician's net income rose 215 percent, their fees only rose 103 percent. This may be attributable to one or more of a number of causes, including an increase in the number of patients seen per day, the proportion of services for which they were paid, time devoted to prac-

tice, greater efficiency, or a change in the composition of services provided.

The report showed that in 1945, 95,141 physicians were in solo practice, but by 1966 this number had increased to 152,198, an increase of 57,057. During the same period of time the number of physicians in partnership jumped from 5,350 to 44,671 for an increase of 39,321.

When ranking the solo practitioner on the basis of average net income per office, Oklahoma ranked number 19 out of the 50 states. Partnerships in Oklahoma figured on the same basis ranked number 22 in the nation.

One interesting fact to come out of the study was that fewer than two-thirds of all active physicians are "self-employed," and that the income of salaried physicians from all accounts are substantially less than the earnings of those wholly or mainly in self-employment practice. Approximately 15 percent of all active physicians are interns and residents, the great majority of whom receive salaries less than \$6,000 per year. □

## Sullens Named Associate Dean of Dental School

Reginald H. Sullens, assistant executive director for education and hospitals and secretary of the Council on Dental Education of the American Dental Association, has been appointed associate dean for planning of the new University of Oklahoma School of Dentistry effective July 1st, 1970.

He becomes the third member of the administrative staff of the school, now being developed at the University of Oklahoma health campus in Oklahoma City. The first class is expected to be admitted in 1972.

Sullens joins Dean William E. Brown and Associate Dean Robert G. Hansen and will be involved directly in the planning of curriculum and facilities.

Sullens has served in his present position in Chicago since 1966 and was secretary-treasurer of the American Association of Dental Schools for seven years prior to that. He is

a graduate of Northwestern University and received advanced education in educational measurements at the University of Chicago.

"Mr. Sullens is one of the most effective and well known dental administrators in the United States and brings to Oklahoma an amazing wealth of knowledge and experience," said Doctor Brown. "As secretary of the Council on Dental Education he has played a major role in the development of policies concerning the program development and accreditation of dental and dental auxiliary education programs." □

## Doctor Draft

### Off for '71

Selective Service System has announced that the Department of Defense does not foresee the need for a doctor draft to meet its medical corp officer requirements for fiscal year 1971.

The announcement was made in a bulletin to all local draft boards from the acting director of selective service, Colonel Dee Ingold. Quoting a letter from the Assistant Secretary of Defense for Manpower and Reserve Affairs, the bulletin stated, "Since 1960 it has been necessary, on an annual basis, for the Department of Defense to request a special draft call for physicians in order to meet the requirements of its military departments for medical officers. These calls have been significant in size in the past several years because of the build-up of forces associated with the Viet Nam conflict.

"As a result of recent reductions in military personnel strength, and because of the significant success in the effectiveness of the Barry Plan as a major procurement source for medical officers, calls in the past two years have been reduced in size, the fiscal year 1970 request being the smallest since 1961. The situation is now even more favorable."

The letter went on to advise the Selective Service System that the Department of Defense did not plan to request a special call for physicians in fiscal year 1971. □

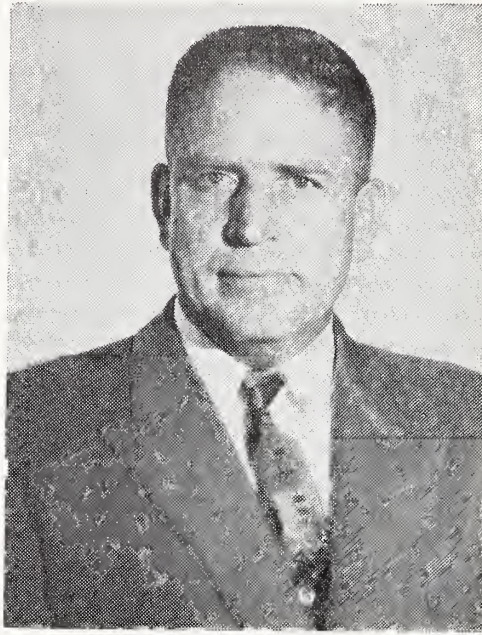


## Medical Board Hires Investigator

The last session of the Oklahoma Legislature gave the State Board of Medical Examiners the authority to hire an investigator to assist in the prosecuting or restraining violations of the medical practice act of Oklahoma. On April 21st Ted Hagstrom was employed by the board to fill the position.

Hagstrom is a native of Kansas and was born near Utica, Kansas in 1915. He is an experienced investigator.

He is leaving employment with the Oklahoma State Board of Pharmacy to accept the position with the Board of Medical Examiners. Prior to being an inspector for the Pharmacy Board, he was employed by the Oklahoma State Narcotic Enforcement Division of the Attorney General's office from March, 1956 until April, 1968. He was chief of the Narcotic



TED HAGSTROM

Enforcement Division after it was transferred to the State Crime Bureau.

Hagstrom's interest in narcotics stem from his first employment with

the Bureau of Narcotics in 1940 at Kansas City, Missouri. From there he was transferred to Tulsa in 1943 and to Oklahoma City in 1948. He resigned from the Federal Narcotic Bureau in 1953 to go into business for himself.

The state law which authorized the board to hire an investigator gave him the same powers and authority as that granted to any peace officer by the laws of the state. Specifically he is to have the authority and duty to investigate and inspect the records of all persons licensed to practice medicine in order to determine whether or not the narcotic laws or the dangerous drug laws have been complied with. Other statutes in the state give him authority to inspect the records of hospitals, pharmacies, and drug manufacturers or supply houses. ☐

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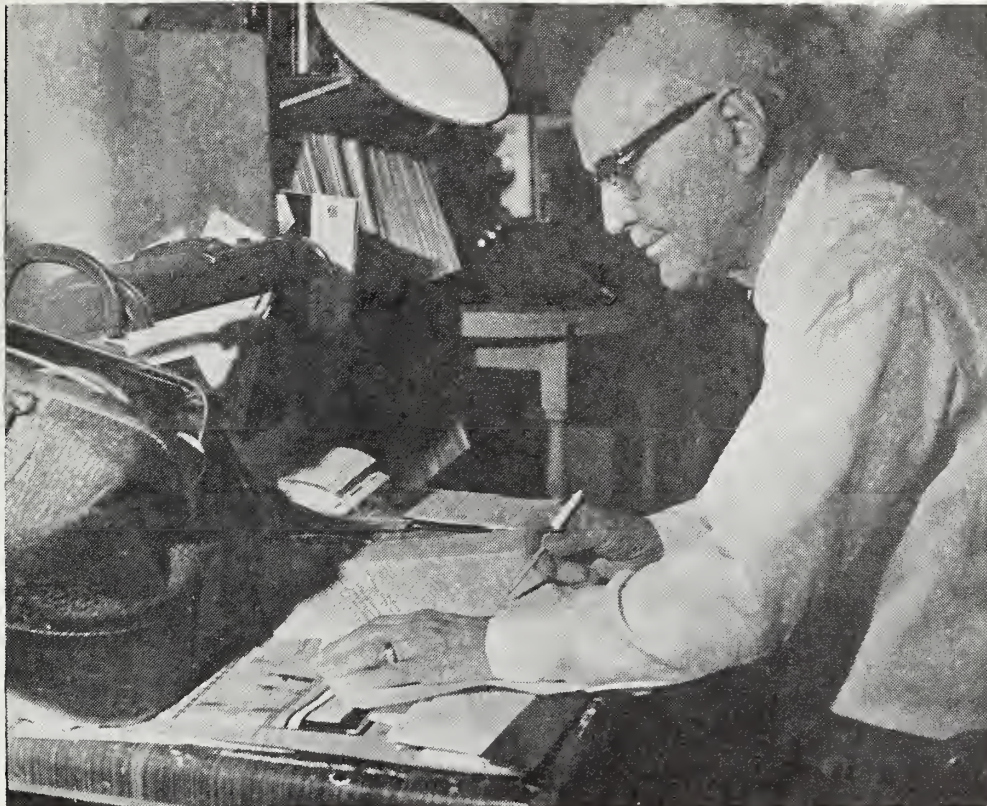
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## Frederick Honors C. C. Allen, M.D.



Doctor C. Curtis Allen, veteran Tillman County physician, was honored by the City of Frederick in a special ceremony Sunday, April 5th. The ceremony officially recognized his retirement from active medical practice after fifty years. (Photo by John Fenrich, Frederick Daily Leader)

On Sunday, April 5th, hundreds of former patients, colleagues and friends gathered in Frederick, Oklahoma to pay tribute to C. Curtis Allen, M.D., a medical pioneer in Tillman County.

The ceremonies, held in Frederick's Memorial Civic Center, officially recognized the retirement of Doctor Allen from medical service in the county after fifty years.

A 1915 graduate of Washington University, St. Louis, Missouri, the doctor interned for two years at the Barnes Hospital in St. Louis before interrupting his civilian service to aid Britain's war effort against the Kaiser in 1917.

"When the famous physician Doctor Ousler called for help in England in 1917 I went with the Harvard unit to England where I was trained in military surgery," the doctor recalled. "I joined the British army in London for a year before being transferred into the American army after the U. S. joined the fight."

The doctor's vivid memories of working with the American Expeditionary Force in Liverpool, England,

were recalled for a feature story that appeared in the Frederick Daily Leader newspaper.

"Things were pretty primitive in many ways during my time in Liverpool. We had good anesthetists, but they were using ether and chloroform and we lost a lot of patients before we could get a chance to operate. We also performed a lot of amputations then that would not now be necessary."

After serving in several oil-boom towns Doctor Allen settled in Frederick in 1925 and became a community leader.

"Looking back, I'd say the best part about the whole thing was the number of good people I got to know around here," said the doctor. "You know, you really get to know people when you have to ride out on a horse to their farm in the middle of the night to deliver a baby, then end up staying all night with them."

"What I can't understand is this ceremony about me retiring. The only thing that I can see that I have done is to outlive most of my enemies, many of my friends and nearly all of my patients." □

## Hospital Radio Network Studied

A statewide emergency medical services communications network is being studied by the Oklahoma Hospital Association in cooperation with the American College of Surgeons' Committee on Trauma for Oklahoma. The project, which is to be completed by June 30, is being funded by a grant from the Oklahoma Regional Medical Program.

Initial objective of the program is to design a basic communications network which will allow every hospital in the state to communicate with other hospitals on a day to day basis or in a disaster situation. In order to facilitate the study and provide guidance, the Hospital Association president, B. Joe Gunn, has appointed a special committee to work with the Trauma Committee.

A communications consultant, William B. Beville, has been retained by the Trauma Committee to make sight visits to every hospital and survey them for type and location of necessary equipment.

In a letter to all member hospitals, the OHA solicited cooperation and pointed out that participation in the survey is not a commitment on the part of the hospital to participate in the program. However, after the survey each hospital will be provided with a guideline that will enable them to participate in the program at a later date. The guideline will be a recommendation from the communications consultant regarding the location of radio transmitters, power supplies and towers.

A secondary objective of the survey will be to establish a uniform radio frequency for ambulances and other mobile emergency units. This would allow cross communication among mobile units during disaster situations.

The network will be designed in such a way that more sophisticated equipment can be added as the need arises or finances permit. Flexibility will be designed into the basic system so that services can be incorporated at a later date without major system modifications. □



## DEATHS

J. FERRELL YORK, M.D.

1907-1970

A long-time Madill physician, J. Ferrell York, M.D., died in Madill April 5th, 1970.

Born in Alco, Arkansas, Doctor York graduated from the University of Texas School of Medicine in 1931. Following a year's practice in Lefora, Texas, he established his practice in Madill where he remained until his retirement in 1962.

Doctor York had been presented a Life Membership by the Oklahoma State Medical Association. He was a member of the Oklahoma Chapter of the American Academy of General Practice.

LEROY DOWNING LONG, M.D.

1897-1970

LeRoy Downing Long, M.D., 73-year old Oklahoma City surgeon, died April 24th, 1970. He was the father of LeRoy Long III, M.D., another Oklahoma City surgeon.

Born in Caddo, Indian Territory, Doctor Long graduated from Harvard Medical School in 1921. He had practiced in Oklahoma City since 1923.

Doctor Long's medical affiliations included the Western Surgical Society, the Southwestern Surgical Congress and the American College of Surgeons.

WILLIAM D. ANDERSON, M.D.

1906-1970

A retired Claremore physician and former city mayor died in Tulsa, March 20th, 1970. William D. Anderson, M.D., was a native of Claremore and graduated from the University of Oklahoma School of Medicine in 1931. After practicing in Stroud, Oklahoma for two years, he established his practice in Claremore.

Doctor Anderson was a member of the Oklahoma Chapter of the American Academy of General Practice and the Beta Theta Pi.

LOUIS N. DAKIL, M.D.

1911-1970

Louis N. Dakil, M.D., McAlester, died March 28th, 1970. The 58-year-old physician was a 1936 graduate of the University of Oklahoma School of Medicine.

Before entering private practice, Doctor Dakil was with the U.S. Department of Interior in Kansas, the Kiowa Indian Hospital and the Clinton Indian Hospital.

In 1965, Doctor Dakil was one of eight doctors in the nation selected by the State Department to attend a special conference in Geneva, Switzerland.

ROBERT B. WITCHER, M.D.

1899-1970

A 70-year-old Tulsa industrial surgeon, Robert B. Witcher, M.D., died April 2nd, 1970. Born in Olney, Illinois, Doctor Witcher graduated from Northwestern University Medical School in 1925. Following a surgical residency and additional postgraduate work in Edinburgh, Scotland, he established his practice in Tulsa in 1927.

Widely interested in sports, Doctor Witcher served as team physician for the University of Tulsa football team from 1941 to 1951.

FREDERICK J. PERRY, M.D.

1912-1970

A Tulsa physician, Frederick J. Perry, M.D., died February 28th, 1970.

Born in Greenwood, Arkansas, Doctor Perry moved to Tulsa in 1921 and was graduated from the University of Oklahoma School of Medicine in 1936. The following year he began his practice as a general practitioner and surgeon in Tulsa, where he practiced continually except for his military service with the Air Force during World War II. □

## BOOK REVIEWS

**A SYNOPSIS OF CONTEMPORARY PSYCHIATRY.** By George A. Ulett, B.A., M.S., M.D., Ph.D., Professor and Chairman, Department of Psychiatry at the Missouri Institute of Psychiatry (St. Louis), University of Missouri School of Medicine; Visiting Professor of Psychiatry, University of Istanbul, Istanbul, Turkey; Director, Division of Mental Diseases for the State of Missouri, Jefferson City. D. Wells Goodrich, M.D., Professor of Psychiatry, Montifiore Hospital and Albert Einstein College of Medicine, New York City. Fourth edition, cloth, 321 pp. Saint Louis: The C. V. Mosby Company, 1969. \$9.50.

This is a very useful little book. I chose to test the authors' purpose by retrospectively imagining this book by my side as a medical student, intern and psychiatric resident. There is no question that it would have served me well during these critical eras of ignorance in the presence of overwhelming requirements for a structured and easily accessible compendium of psychiatric knowledge. Not one of the various texts recommended to us during these periods met the criteria of immediate usefulness and comprehensive relevance combined within pocket sized conciseness, but this book does. To make it of particular interest to the developing specialist it also contains a sufficient brief treatment of rarities and satisfactorily ranges over the controversies and diversity within psychiatric viewpoint and practice.

The authors also suggest the book's utility for the general practitioner. Perhaps good use of the book might be made by the non-psychiatrist physician, but there are much better books for such a purpose, e.g., Enlow and Wexler's "Psychiatry In The Practice Of Medicine."

To further test the book I have used it to inform myself about matters which ideally I should have thoroughly assimilated within the period of my training and practice. As most of us know (and are usually reticent to admit), much of this material is not as efficiently incorporated or as instantly and permanent-



ly available as we would wish. This book is a very satisfactory backstop for this deficiency.

Among my acquaintances preparing for Specialty Board examination, a few already know and appreciate this volume. I have recommended it to others, particularly because of its inescapable convenience and "reviewability," i.e., it is a genuine synopsis of contemporary psychiatry and begs to be used for such a purpose. In line with my own special interest I found the chapter on individual psychotherapy remarkable and rewarding in its lucid coverage of historical, theoretical and tactical matters. Accustomed as I am to large and fat books with elegant reputations, I have been obliged to rediscover that good creations are still available in small packages.—*Joseph B. Ruffin, M.D.*

**PATIENT CARE AND SPECIAL PROCEDURES IN RADIOLOGIC TECHNOLOGY.** By John C. Watson, R.T., technical consultant, Department of Radiology, Yale Medical Center and Yale-New Haven Hospital, New Haven, Connecticut. Third edition, cloth, 227 pp., with 148 illustrations. Saint Louis: The C. V. Mosby Company, 1969. \$8.25.

This is a textbook for technologists defining their roles as members of the medical care team. It discusses X-ray technology as a profession and gives an overview of health care as it is delivered in our country today.

The approach is primarily patient centered which is refreshing in this age of depersonalization.

Several chapters are devoted to basic nursing procedures as they apply to radiology. These are con-

cise, clear, and well presented.

The sections on neuroradiography and vascular radiography have been modified and updated, and are outstanding presentations for both technologists and students of technology.

Interestingly, most of the references are ten years old or older. One wonders whether this represents a paucity of newer material on these subjects in the literature. Also, in the list of items suggested for inclusion in emergency drug stocks, amyl nitrate instead of amyl nitrite, has been listed in the last two editions of this book. This should be corrected.

This book certainly is of value for technologists-in-training. It can serve as a valuable reference on special procedures for trained technologists.—*Teresa Stacy, M.D.* □

## Miscellaneous Advertisements

G.P. NEEDED for nine-man clinic located in a 120-bed accredited hospital. Salary \$35,000 guaranteed with a percentage. City of 12,000, plus college, located in central Texas. Contact Key T, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.

WANTED: THREE PHYSICIANS: One internist, board certified or board eligible for full-time assignment to Medical Service; One generalist for assignment to Outpatient Service duties; 390-bed general medical and surgical hospital; beginning salary \$18,531 to \$25,189 PA depending upon qualifications; approximately 20 percent additional fringe benefits including annual and sick leave; insurance and retirement plan. Non-discrimination in employment. Location is a superlative outdoor recreation area. Contact Chief of Staff, Veterans Administration Hospital, Muskogee, Oklahoma.

FOR SALE: PROFX-RAY 100 MA cassettes, hangers, developing tank and x-ray filing cabinets. Two Allison examining tables. Contact Floyd Moorman, M.D., 1414 Canterbury Place, Oklahoma City. Phone 842-9828.

MED STUDENT SEEKS SMALL TOWN PRACTICE. Senior OU medical student has advised the OSMA that he will commit himself to practice in a small Oklahoma town in return for a non-refundable loan of \$10,000. The student, whose name will be furnished by the OSMA office on request, will sign a contract to serve up to four years. However, it will be four years before he can begin private practice since he must complete his internship and serve three years in the navy.

WANTED YOUNG GENERAL SURGEON, capable of some chest and vascular. Must be aggressive and enjoy hard work. Associate with three young general practitioners. Drawing area population 10,000 plus; 55 hospital beds; 144 nursing home beds. Have excellent anesthesia and surgical facilities and staff. Location in small Northwestern Oklahoma town. Salary first year \$30,000 to \$35,000 net with opportunity for partnership after first year. If interested, contact Key W, The Journal, Oklahoma State Medical Association, P. O. Box 18696, Oklahoma City 73118.

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EXCELLENT OPPORTUNITY for ophthalmologist in Altus, Oklahoma. No other ophthalmologist within area. Lucrative practice. Approximately 30,000 population in agricultural vicinity. Air Force Base. Contact Willard D. Holt, M.D., 205 West Cypress, Altus, Oklahoma.

FOR SALE: BIRTCHER Crystal Shortwave Diathermy, model 800. Excellent condition. Sells new for \$975—for cash deal priced only \$350. Has triple induction drum. Been used very little. Contact Key M, The Journal, Oklahoma State Medical Association, P.O. Box 18696, Oklahoma City 73118.



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*Griffin*



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And to make him happy—I always try.

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His efforts, I honestly praise.

I never try to wear a halo  
As in my civic duties I go about  
Even tho I am so terribly proud—  
My husband's praises I could shout.

I try to treat everyone with kindness and  
courtesy  
Personally—and on the phone  
In every way, I try to be helpful—  
Knowing that my Doctor can't do every-  
thing alone.

I never forget for one moment

My very special mission in life—  
And constantly give thanks to the Master  
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ing greater than medical auxiliary, for we  
are a special group of women banded and  
bonded together to fight with all our might  
for the right in the practice of medicine in  
its excellency concerning our husbands.

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ject in our individual communities the need  
for freedom in medicine in the great big  
wonderful land of ours—America.

Bless you always,  
ZELLIE



**Fees and Wages:** In his new book, *Medicare*, Robert J. Myers presents comparison to the annual increases in physicians' fees and in general wages. The comparison is instructive, especially in view of the criticism of physicians' fees by those seeking a scapegoat for the high cost of Medicare and Medicaid. The average annual increase in fees for the years 1956 through 1965 was 3.0 percent, but the average annual increase in wages during the same period was 3.6 percent. Myers, who is the Social Security Administration's Chief Actuary, said physicians' fees were expected to increase "over the short range future" after the passage of Medicare. The increases were 5.9 percent in 1966, 7.3 percent in 1967 and 5.5 percent in 1968. But the total fee increase during the three-year period was only 1.0 percent above the rise in the general wage level. *Myers comparison reveals that from 1956 through 1968, the average annual increase in physicians' fees was 0.5 percent below the average annual increase in general wages.* During the twelve-year period, wages rose an average of 4.2 percent each year. Physician fees went up 3.7 percent.

**The Associated Press, in a recent series of articles on health care cost, pointed out that "a visit to the doctor's office remains a bargain, costing only about a dollar more than it did a few years ago."** AP also mentioned overhead, a point so often overlooked by writers on health care costs. As an example it cited a flabbergasted Indiana physician who found it necessary to boost his office charges when a cost accounting study revealed that he was netting only 83 cents per patient.

**Seven out of eight Americans have some form of private health insurance,** according to a year-end report of the Health Insurance Institute. A year ago the report was six out of seven.

**The most liberal abortion law is now in the state of New York.** Governor Rockefeller of that state signed the new law which makes an abortion a matter between a woman and

her physician up to the 24th week of pregnancy. After that time, an abortion can be performed only to save a woman's life.

**One week in jail should be the maximum penalty** for first time offenders convicted of possession of marijuana. That was the recommendation of the United States House of Representatives Select Committee on Crime. It suggested that Federal legislation dealing with possession of sale of small quantities of the drug be patterned after a Nebraska law classifying possession of marijuana as a misdemeanor and requiring convicted offenders to attend drug education classes. Failure to eliminate punitive legislation will only invite further disrespect for the judicial process, according to the committee.

**More harm than good was done by the recent Senate hearings on oral contraceptives** according to Roger O. Egeberg, M.D., Assistant Secretary of HEW. In remarks to the World Congress of Gynecology and Obstetrics he said the hearings emphasized the dangers of the pill without emphasizing the dangers of the alternatives. "The chances of death by clotting during pregnancy are six times as great as if you took the pill," he said. "The chances of dying in childbirth are seven times as great as if you took the pill." Doctor Egeberg said he would urge that the following sentence be added to the FDA's proposed insert for oral contraceptive packages: "If you intend to use the pill, you should know that if you do not use it and get pregnant that the chances of something happening to you are thirteen times as great as if you used the pill."

**Medicare expanding proposals were recommended to the House Ways and Means Committee by the Department of HEW.** One proposal, known as Medicare "Part C," would give those over 65 a choice between their existing Medicare benefits and a broader type of government subsidized protection that would stress prevention. These preventive services would be furnished by a "health maintenance organization." This organization would be made up through the local medical society and the medical society would be paid for its services by the government. The proposal is actually designed to foster development of nonprofit, prepaid group medical practice. □



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## *Activities in the Clinical Research Center at Children's Memorial Hospital*

THIS ISSUE of *The Journal* presents a portion of the proceedings of the first Clinical Research Center Day which was held at the University of Oklahoma Medical Center, Oklahoma City, on April 19, 1968. The program consisted of reports and discussions of some of the clinical investigations which have and are being carried out in the Clinical Research Center at Children's Memorial Hospital. It is appropriate to provide pertinent background of the Clinical Research Center. The Clinical Research Center is a ten-bed unit in Children's Memorial Hospital, University of Oklahoma Medical Center, which is specially designed, staffed and equipped for multi-categorical, multi-disciplined clinical investigations. The Center is supported by a grant from the Clinical Research Centers Branch, Division of Research Facilities and Resources of the National Institutes of Health. It is the only such center in the state and region for studies in depth of complex disorders in infants and children.

The broad spectrum of these investigations to be described is in keeping with the objective of the Clinical Research Center to apply basic research advances to problems in clinical medicine. Interesting studies on the syndrome of obesity entitled "The Prader Willi Syndrome" are described by Doctor J. Darrel Smith and co-workers. In addition to describing the largest series of this disorder occurring in females, they have also pointed out for the first time the occurrence of sexual precocity in this condition and have postulated a possible mechanism to explain the endocrine dysfunction.

Doctor J. Rodman Seely and his collaborators, two of whom are medical students, report important developments in the rapidly growing field of cytogenetics and describe the first case of monosomy 22.

Doctor Arthur Nunnery and Doctor Harris D. Riley, Jr., describe some of the pioneering techniques which have been developed in the Pediatric Pharmacology Unit

at Children's Memorial Hospital and which have now been extended to the Clinical Research Center.

Doctor Paul Donat, Resident in Urology, along with Doctor Albers and Doctor Parry from the Department of Urology, describes the results of correlative studies of renal function carried out in children at the Clinical Research Center.

In subsequent issues of *The Journal* reports of other studies carried out in the Clinical Research Center will be presented.

It is quite clear that these complex and sophisticated studies could not have been carried out without the availability of the Clinical Research Center and its resources. It is firmly established as a unique and highly effective facility, with supporting staff and core laboratories, that promotes and permits the achievement of such a wide variety of high caliber, multidisciplined, clinically oriented investigations relating to the health problems of infants and children. To date some 75 different investigations have been carried out or are approved to begin. The scientific productivity of the Clinical Research Center is reflected by the publication of over 35 papers and 60 abstracts and presentations at scientific meetings of over 60 papers dealing with investigations conducted utilizing the facilities and resources of the Center.

Although the principal purpose of the Clinical Research Center Day program was to focus on research carried out in the Clinical Research Center, it should also be noted that the Center, in addition, has served an invaluable role in providing education and training to a large number of different types of health personnel. More than 50 investigators from multiple disciplines in 15 different clinical and basic science departments of the Medical Center have been involved in the Clinical Research Center. Training programs are being provided for medical and



nursing disciplines and a variety of allied health personnel. Participants have included over 400 medical students, 278 nursing and practical nursing students, 61 interns, 73 residents, 32 post-doctoral fellows, and 72 dietetic interns.

The wide distribution of personnel represented on this program should be noted. This included full-time faculty members in a variety of different departments at the Medical Center, practicing physicians, research fellows and house officers in several different disciplines, and medical students.

The Clinical Research Center is truly a unique resource for Oklahoma and this region. An important aspect in this day of spiraling hospital costs is that there is no charge for hospitalization of patients who

qualify for admission. Physicians who desire more information about the facilities and patient eligibility for admission to the Clinical Research Center may obtain this by contacting: Program Director, Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, 800 Northeast 13th Street, Oklahoma City, Oklahoma 73104 (Phone: 405 236-1366).

On behalf of all of the investigators involved in the Clinical Research Center, we are pleased to have this opportunity to have the proceedings of the first Clinical Research Center Day program recorded in the *Journal of the Oklahoma State Medical Association*. *Harris D. Riley, Jr., M.D., Pediatrician-in-Chief, Principal Investigator, Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center.* □

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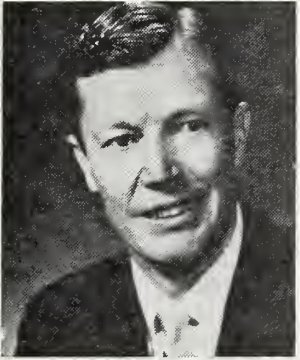
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Another Medical School class has graduated from the OU Medical Center. Our warmest congratulations and sincere Godspeed in their future welfare. How many of these young physicians will eventually begin their practice in

Oklahoma, one can only conjecture. In the past approximately 50 percent stayed to minister their talents to its people.

Secretary Egeberg has estimated America needs 50,000 more physicians. The Medical outlook in Oklahoma could be considerably brightened if we could obtain one hundred physicians to go into practice.

Some 20 years ago approximately 50 percent of the graduating seniors went into general practice and the remainder into various specialties. Now less than 30 percent go into general practice with a fair percent drawn to research and various administrative capacities not available in years past.

John Q. Public—the ever patient, always present tax payer continues to pay for over half of the cost of the young physician's education and with a dwindling return on his investment, is beginning to grumble. The individual physician, be he generalist or specialist, still rates ace high with old John Q. (see recent Medical Economics), but there just are not enough of them.

The toscin has sounded. This must be

solved. But how? Perhaps, as Doctor Rex Kenyon recently suggested to the national AMA audience that all the money in the world would not be the answer. Health care systems are changing. Certain ineffective, time consuming ritual on the physician's part must be delegated to other lesser trained personnel, thereby allowing him to direct his attentions to more serious clinical problems.

The above transition will be both painful and difficult. How these and other goals are to be accomplished has not yet been implemented. HEW has many plans brewing to solve these Health Manpower problems. Private American Medicine awaits another giant of yesteryear's Flexner, but none has yet presented himself. It then becomes our individual and team responsibility for workable solutions or its implementations will be taken from us.

The State Medical Association stands ready for any and all suggestions. We hope to develop closer liaison with the Medical School. Osler was firmly against an all full time faculty because he felt the student wasn't best served by this method of teaching. As Doctor Mark Johnson and Doctor H. W. Truett, Jr. so aptly wrote in our May Journal, our theme must be "Together We Teach" and "Forward Together." This might well be our first step, instilling in the student the thing we know best—the love of the private practice of medicine. □

Sincerely yours,

*E. L. Carlson M.D.*



*The following papers represent the transcription of the proceedings of the first Clinical Research Center Day program which was held at the University of Oklahoma Medical Center, Oklahoma City, on April 19, 1968. It should be noted that these papers represent transcriptions of the actual presentation as given and, for this reason, extensive bibliographies are not included.*

## Clinical-Metabolic Study of the Prader-Willi Syndrome

J. DARREL SMITH, M.D.  
JOSEPH NEEMAN, M.D.  
JOHAN WULFF, M.D.  
J. RODMAN SEELY, M.D., Ph.D.

*Obese children with short stature, small hands and feet, hypotonia and other features of diffuse central nervous system dysfunction, including mental retardation and speech problems should be thoroughly investigated for this "syndrome."*

IN 1956, Prader-Willi-Labhardt and Fanconi described a syndrome characterized by hypotonia in infancy which improves with age, mental retardation, short stature, marked obesity, small hands and feet, and an early onset of diabetes mellitus. Since very few adults have been described, it appears that death occurs early mainly due to complications of diabetes and the cardio-respiratory dysfunction of obesity. With increasing awareness of this complex of abnormalities, there is some suggestion that the incidence may approach that of Trisomy-21 (Mongolism). For lack of knowledge of the etiology and pathogenesis, we have retained the eponymic designation Prader-

Willi Syndrome. A multi-disciplinary investigation of the genetic, endocrinologic, metabolic and neurologic abnormalities of the syndrome conducted on a group of seven girls has contributed two major clinical findings and permitted a more precise definition of the metabolic-endocrine defects.

This distinct form of obesity which starts in early childhood is accompanied by the following characteristics which are summarized in Table 1. Weights ranged from 25 to 300 percent above ideal for height. They all showed some abnormality in carbohydrate tolerance, either by the glucose curve or the insulin response. Sexual precocity present in six of the seven girls is a finding which has not been reported previously. The syndrome has been described mainly in hypogonadic and usually cryptorchid or anorchic males. The few females reported have had no sexual abnormalities. Except for diabetes and hypogonadism in males, other endocrine dysfunctions have been poorly documented. Acromicria manifested mainly by small

Table 1.

Obesity	7/7
CHO Abnormalities	7/7
Sexual Precocity	6/7
Endocrine Deficiencies	3/7
Short Stature	7/7
Acromicria	6/7
Amyotonia	7/7
Mental Retardation	6/7
Speech Problems	7/7
Scoliosis	2/7
Strabismus	6/7
Dental Caries	2/7

From the Department of Pediatrics and the Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The Clinical Research Center is supported by Grant No. FR-62 from the National Institutes of Health.



Table 2.  
AGE

Pt.	Chron.	Height	Bone	Sex Develop.
1.	19	↓	=	P
2.	12	↓	↑	TP
3.	10	↓	↑	pp
4.	8	↓	↑	TP
5.	7	↓	↑	P
6.	5	↓	=	P
7.	5	↓	↓	P

P — precocious pubarche  
TP — “True” complete precocity  
pp — prepubertal

hands and feet was present in six. An amyotonia-like picture was present in all seven children. They were hypoactive in utero and floppy as infants with walking delayed to ages 20 to 30 months. Muscle strength improved with age, but even in the older girls, the muscle mass and function is poor. The I.Q. was a normal 107 in one patient, again a finding not previously reported. In the others the I.Q. ranged between 32 to 84. Although one child has had minor motor seizures, and five have abnormal electroencephalograms, none have definite neurological deficits. They all have abnormal speech patterns. Associated abnormalities, such as scoliosis was noted in two, strabismus in six, and excessive dental caries in two.

Their ages range from 5 to 19, all being short, lagging from one to seven years behind the average for their age, and this in spite of sexual precocity in six of the girls (Table 2). Although patient No. 3 at age ten is prepubertal, her bone age is advanced one and one-half years. Only in one patient, No. 7, is the bone age retarded by one year, although she already shows definite sexual hair. In patient No. 6, the bone age is the same as the chronological age. The

Table 3.

Pt.	ENDOCRINE EVALUATION			GH
	FSH	TSH	ACTH	
1.	<6	*	N	N
2.	6-16	N	N	N
3.	—	N	N	—
4.	<6	N	N	N
5.	—	N	N	O
6.	—	N	N	N
7.	—	N	N	O

\*—Acquired hypothyroidism  
N—Normal  
O—No response to hypoglycemia

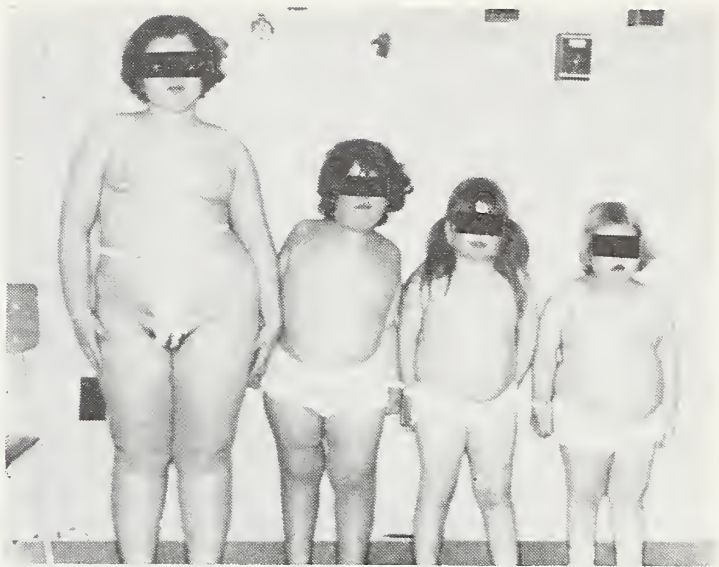


Figure 1. Prader-Willi Syndrome.  
Age 12 7 5 5

others are advanced by three to five years above the chronological age. The first patient has fused epiphyses. Patients No. 2 and No. 4 have complete sexual precocity with menses beginning at age 7½ years, while four of the others have only premature pubarche or adrenarche beginning at age five to six.

Table 3 summarizes the results of the hypothalamic-pituitary-endocrine end organ studies. The oldest patient, age 19 years, has had irregular menses for the last 24

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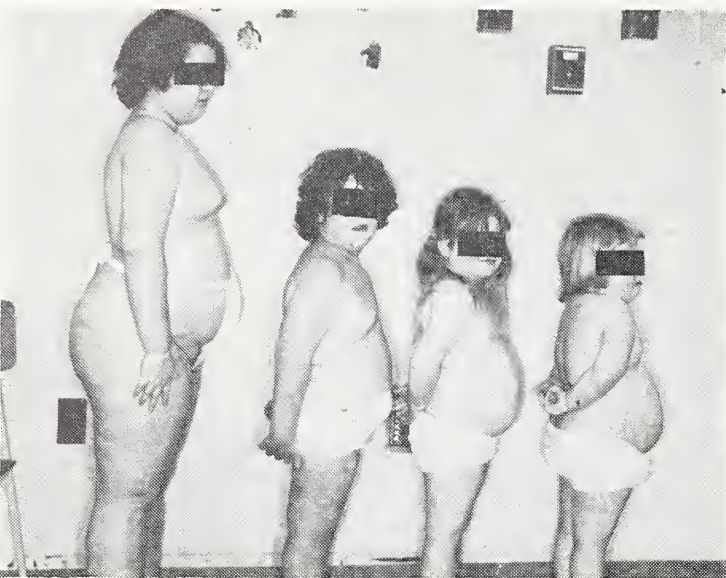


Figure 2. Prader-Willi Syndrome.  
Age 12 7 5 5

months with urinary FSH levels undetectable; values are given in mouse-uterine-units. The hypothalamic-pituitary-adrenal axis was found to be intact regarding ACTH release as determined by normal response to Metapirone stimulation, diurnal pattern of plasma corticosteroids, and plasma cortisol

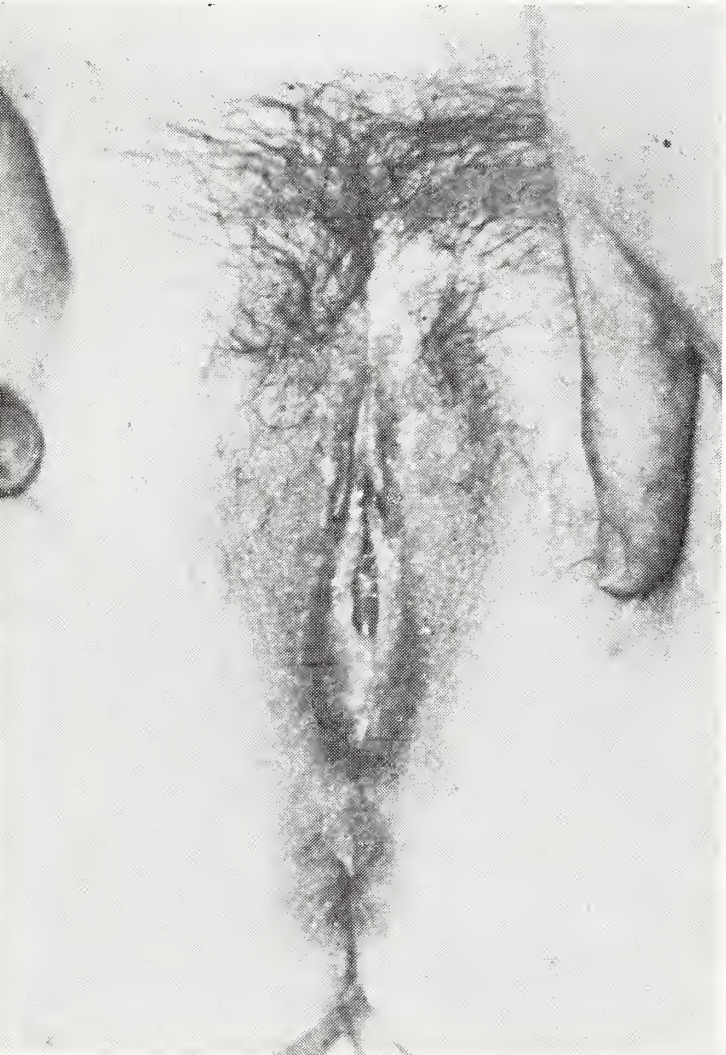


Figure 3. Prader-Willi Syndrome.  
Precocious pubarche Age 6

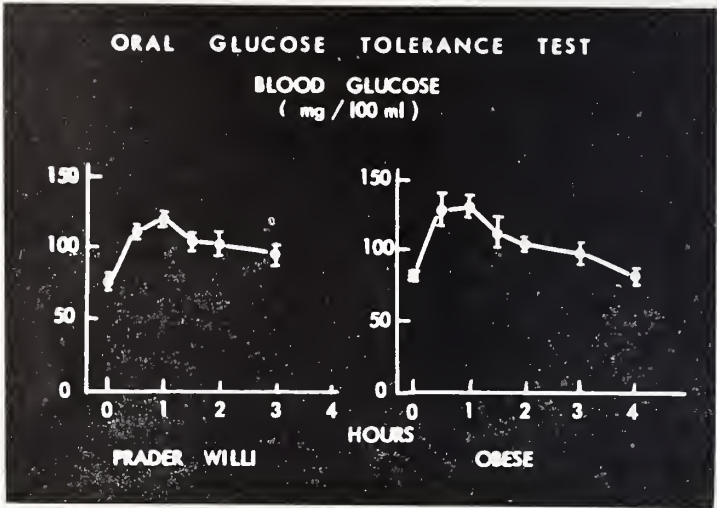


Figure 4. Prader-Willi Syndrome.

response to insulin induced hypoglycemia. TSH release, as determined by serum thyroxine and thyroidal I<sup>131</sup> uptake, was in the normal range in all instances except in the first girl, in whom acquired primary hypothyroidism had developed within the past two years. In two of the girls there was no growth hormone release in response to insulin induced hypoglycemia. All six girls have normal chromosome counts and karyotypes. No consistent pattern was found in their palmar dermatoglyphics. Figures 1 and 2 show four of our patients with obesity and short stature. Scoliosis is obvious in the two children on the left. The six-year-old child in Figure 3 had the appearance of sexual hair at age three years.

Of major interest in this report is the investigation of the abnormal carbohydrate regulating mechanism. Serial determinations of glucose and immuno-reactive insulin were made during a standard glucose tolerance test (GTT) and if these were normal, they were repeated after glucocorticoid (Triamcinolone) provocation. Growth hormone levels were determined by radio-immuno assay during insulin-induced hypoglycemia.

In order to compare the results and to evaluate the role of obesity on the alterations in carbohydrate metabolism, seven obese children without the Prader-Willi Syndrome were studied in a similar fashion. The results are summarized in Figure 4, compares the blood glucose levels during an oral glucose tolerance test between the Prader-Willi patients and the obese children. Time in hours is plotted on the horizontal axis. Blood glucose concentration in mg/100 ml



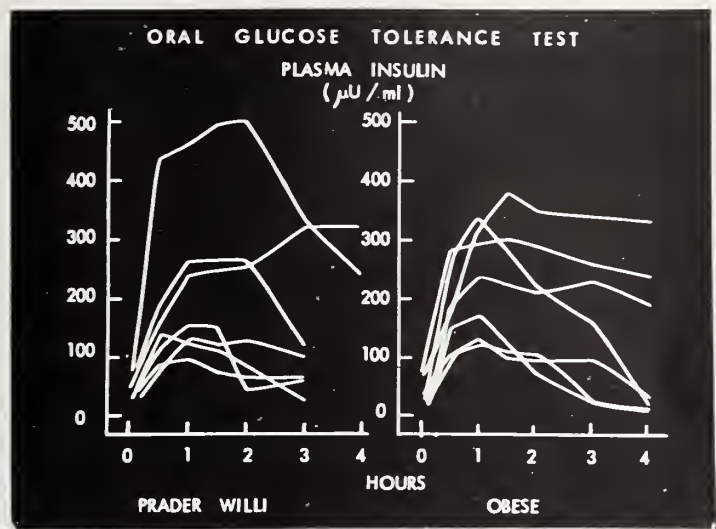


Figure 5. Prader-Willi Syndrome.

is plotted on the vertical axis. The standard error of the mean is indicated by a vertical bar for each determination. Inspection of the two curves suggests the Prader-Willi patients to have a slightly delayed return of blood glucose values to normal for these small groups, but statistical analysis failed to show a significant difference between the two tests for any given point. However, Triamcinolone augmented glucose tolerance tests were abnormal in all Prader-Willi subjects.

Figure 5 shows the plasma insulin values during the oral glucose tolerance test for both groups. Each individual patient is indicated by a continuous curve. Two patients with the Prader-Willi Syndrome demonstrated an excessive insulin release, while four of the remaining children had a rather low insulin release, and the remaining five children have either a normal or high insulin curve.

In order to express the insulin secretory

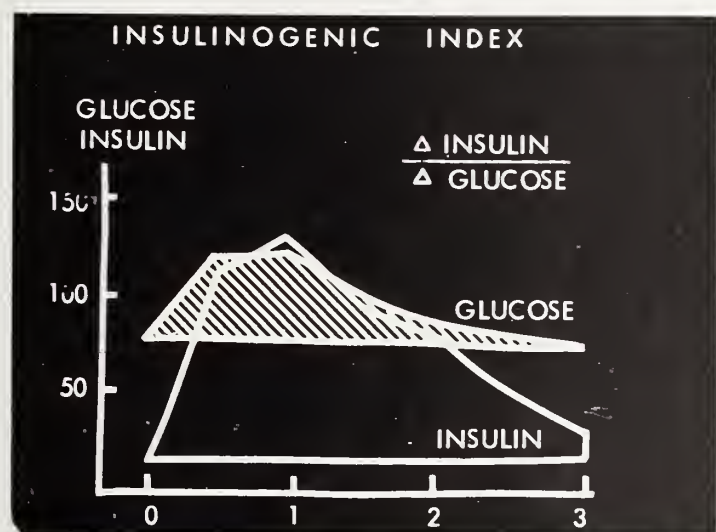


Figure 6. Prader-Willi Syndrome.

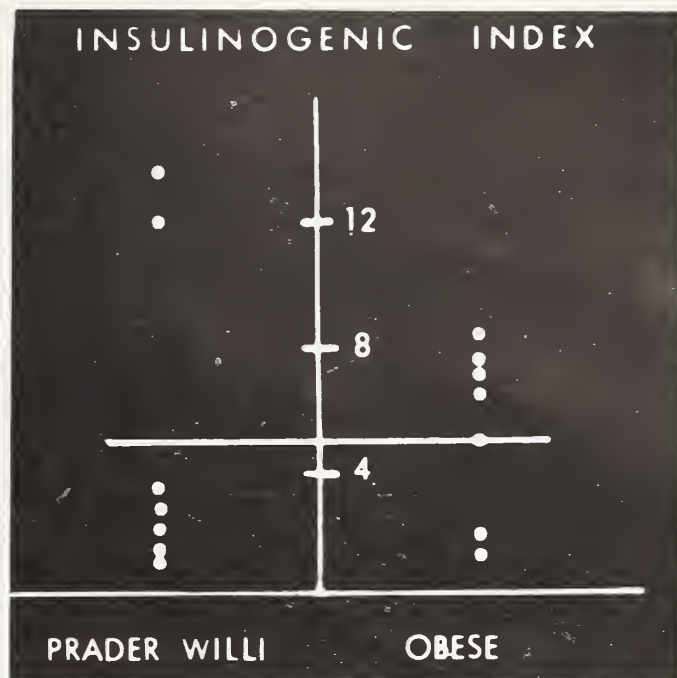


Figure 7. Prader-Willi Syndrome.

capacity of the pancreatic beta cells, the Insulinogenic Index, as suggested by Seltzer, *et al.*, was calculated for each subject. Figure 6 shows how the Insulinogenic Index is derived. It is calculated as the ratio between the area under the insulin curve above the fasting level and the area under the glucose curve above the fasting level. Seltzer's normal Insulinogenic Index in adults is 4.93 and in obese adults 5.45. We obtained similar values in a control adult population.

Figure 7 shows the Insulinogenic Index for each subject in both groups. The normal Insulinogenic Index is indicated by a horizontal line.

Five of the Prader-Willi patients have indices in the diabetic range, while the remaining two have very high values, indicating peripheral resistance to insulin, but a normal insulin secretory capacity of the pancreas. Five of the obese children have normal indices, while two fall in the diabetic range. The latter two subjects are sisters who have a strong family history of diabetes.

It appears that the carbohydrate metabolic pattern in the Prader-Willi Syndrome is similar to diabetes mellitus in five out of seven subjects, and not the result of obesity *per se*.

#### SUMMARY AND CONCLUSIONS

From these studies we interpret this syndrome as representing congenital diffuse central nervous system dysfunction, with hypotonia present in utero, mental retarda-



tion, speech and electroencephalographic abnormalities, and variable hypothalamic dysfunction. Birth and family histories, and chromosomal analysis do not suggest a common etiological factor for the brain damage.

The hypothalamic-pituitary release of ACTH and TSH was normal in these children (excluding the 19-year-old girl with acquired hypothyroidism). Although growth hormone release was impaired in two children, deficiency of this hormone does not appear to be the common denominator for the short stature.

Sexual precocity, rather than hypogonadism as previously reported in males, has been a striking feature of the hypothalamic dysfunction in our girls. Early gonadotropin release apparently has occurred in all but one of these children. The obesity is likely related to variable combinations of abnormal hypothalamic control of appetite, decreased motor activity and altered carbohydrate-insulin metabolism.

The basis for the consistent abnormality in carbohydrate-insulin regulation is not explained by these studies; however, they do not appear to be related to age, degree of obesity or absence of growth hormone. □

## CBS REJECTS AMA - NMA REQUEST

The Columbia Broadcasting System has rejected a request from the American Medical Association and the National Medical Association for equal time to rebut the network's three "Health in America" TV documentaries. After rejecting the request for equal time, CBS suggested a brief "Meet the Press" type of telecast as a means of rebuttal. Both AMA and NMA rejected this counter proposal and stated, "Because of the bias nature of the three one-hour programs telecast April 20th, 21st, and 22nd, we feel that anything less than equal time would fail to rectify the network's negative portrayal of the nation's health care system."

In the response to CBS both medical organizations pointed out that they recognized that serious problems exist in the health care delivery, but that these complex problems deserve objective examination. They stated, "Objectivity was lacking from the CBS programs, which failed to touch on the many constructive actions now underway throughout the country." They went on to say, "The public deserves the opportunity to view the numerous efforts now being made by the NMA, the AMA, federal and state agencies, private groups and dedicated individuals to

meet and solve health care problems. The public, we believe, should have the chance to see these aggressive projects in action before being incited by CBS to give support to schemes of government medicine. We believe that CBS, as a publicly licensed medium, owes it to its viewers to correct the imbalance of its presentation on this important issue."

A copy of the letter rejecting the CBS counter offer was sent to Dean Burch, Chairman of the Federal Communications Commission. Following the CBS rejection, AMA and NMA instituted meetings with the National Broadcasting Company and the American Broadcasting Company to discuss possibilities of presenting both sides of the issue on either network.

A radio-television columnist for the New York *Daily News* attributes the following statement to a CBS spokesman: "If the program failed to 'accentuate the positive' that, in essence, is what journalism is all about." Both the AMA and the NMA said that they did not ask that the "positive be accentuated," but they would like to have seen a more balanced treatment of the subject. □



# New Chromosomal Abnormalities

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*The ability to do chromosome analysis has proved a potent asset for advancing our knowledge of the consequences of chromosome abnormalities in man. This research tool of yesterday is rapidly taking its place in the armamentarium of the practitioner today.*

THE ESTABLISHMENT of the Clinical Research Center and the Pediatric Research Cytogenetics Laboratory at Children's Memorial Hospital, University of Oklahoma Medical Center, has made possible a selective screening program of patients whose clinical findings suggest the possibility of a chromosomal abnormality of a unique nature. The material to be presented stems from in-depth study of two patients detected in this program to have new or very unusual chromosomal abnormalities.

The first of these chromosomal abnormali-

From the Department of Pediatrics and the Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The Clinical Research Center is supported by Grant No. FR-62 from the Division of Research Facilities and Resources, National Institutes of Health. These studies were also supported by CA-06420 from the National Cancer Institute, by a grant from the National Foundation, and by the General Research Support Grant of the University of Oklahoma Medical Center.

ties is that of *autosomal monosomy* which has been presumed to be incompatible with life. The patient is an 18-month-old white female who was referred at two months of age because of failure to thrive. She is the only child of young, healthy parents, neither of whom had had therapeutic radiation. The pregnancy was uncomplicated, without unusual medications, and there was no history suggestive of early maternal viral infection. The family history is contributory in that the father had epicanthal folds, as does his grandfather, father, and five brothers. He also has bilateral, short, incurved fifth fingers, as does his mother and two of his brothers. There is no family history of infertility problems, early abortions, anomalous infants, or early neonatal deaths.

Some of the physical findings are listed in Table I. The child had mild motor and mental retardation. She was inactive, hypotonic, had a weak cry and poor suck. The head was unusual in shape, with an occipital prominence. Bilateral epicanthal folds were present and there was a mild first arch syndrome consisting of low-set ears, intact high

## PHENOTYPE OF MONOSOMY-22

Motor and mental retardation (mild)  
Hypotonia  
Occipital prominence  
Epicanthal folds (father)  
Low-set ears  
Arched palate  
Micrognathia  
Congenital heart disease (? P. S.)  
Short incurved little finger (father)  
Arachnodactyly (mild)



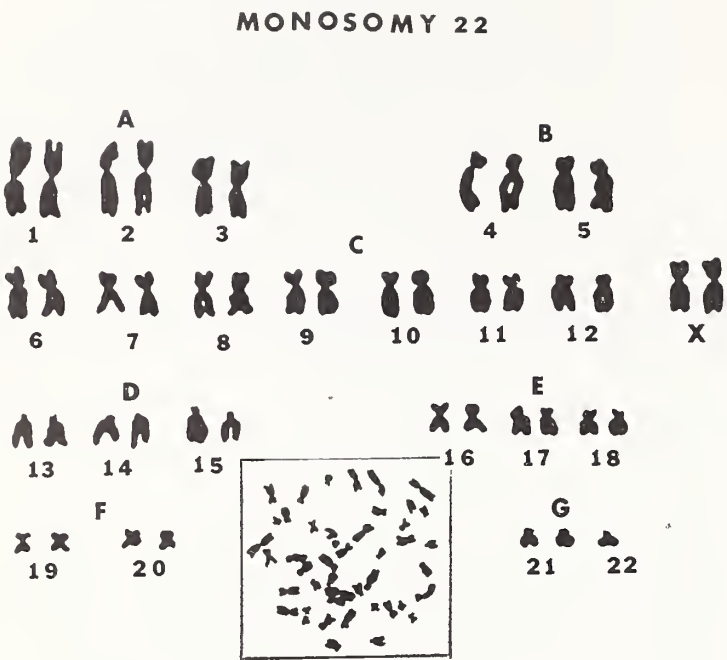


Figure 1.

arched palate and micrognathia. She had findings compatible with pulmonary stenosis. The fifth digits were somewhat short and incurved, as were her father's, and there was mild arachnodactyly; the dermatoglyphics were abnormal with all dermal markings being very fine, unlar loops on all ten fingers, and the axial triradii were distally placed. There were no simian lines. Radiographic studies of the gastrointestinal, renal, pulmonary and skeletal systems failed to reveal anomalies.

Chromosome analysis was carried out on peripheral blood using a modification of the Moorhead procedure. A representative karyotype is shown in Figure 1. Chromosome counts have been consistently 45, instead of the normal 46. In the G-group, which consists of chromosomes number 21 and 22, there are only three members present. One of the G-group chromosomes is missing. In all karyotypes the unmatched chromosome appears to be smaller than the other two, suggesting it is a number 22 which is missing. Thus, the designation monosomy-22.

It is possible that the missing chromosome, or part of it, is translocated to another chromosome, and that the child is a balanced translocation carrier or has a partial monosomy. However, attempts to detect a translocation have been unsuccessful. In all reported cases of translocation of an entire chromosome, the translocated chro-

RED CELL ENZYME ASSAYS IN MONOSOMY-22

	G6PD*	6PGD*
Proband	308	114
Father	358	202
Mother	352	104

\*Units/100 ml. RBC  
All values in normal range

mosome has been readily identifiable which would make the possibility of a translocation seem unlikely.

The finding of a comparable karyotype in one or the other of the parents would strongly support the presence of a balanced translocation. However, chromosome analysis in both parents was normal. Thus, this is most likely a case of monosomy-22 (45,XX,22-).

The mechanism leading to G-monosomy is shown diagrammatically in Figure 2. Dur-

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*Turan Kutkam, M.D., Assistant Professor of Pathology at the O.U. Medical Center, obtained his medical training at the University of Ankara, Turkey.*

*A. William Shafer, M.D., graduated from the University of Kansas School of Medicine and is presently Associate Professor of the Department of Laboratory Medicine and Director, Blood Bank at the O.U. Medical Center.*

*Richard Bottomley, M.D., graduated from the University of Oklahoma School of Medicine where he is presently Associate Professor of Research Biochemistry.*

*Martin Griffin, Ph.D., received his doctorate at the University of Chicago and is now Associate Professor of Biochemistry at the University of Oklahoma Medical Center.*

*Gayle Stoddard, B.S., is Chief Technologist of Research Cytogenetics Laboratory at the University of Oklahoma Medical Center.*



RED CELL PHENOTYPE IN MONOSOMY-22			
Antigen	Father	Proband	Mother
A	O	+	+
B	O	O	O
D	+	+	+
C	+	+	+
E	+	O	+
c	+	O	+
e	+	+	+
Duffy <sup>a</sup>	+	+	+
Kell	O	O	O
Cellano	+	+	+
M	+	+	+
N	O	O	+
S	+	O	O
P	O	O	+
Lewis <sup>a</sup>	O	O	O

ing meiosis (in either oogenesis or spermatogenesis) one of the pairs of G-group chromosomes fails to separate. That is, non-disjunction occurs, with both members going to one gamete and nothing to the other. The resulting zygote from these has G-monosomy in one case and G-trisomy in the other. In theory, these two should occur with near equal frequency. G-trisomy, specifically trisomy-21 or mongolism, is a relatively frequent event. However, because of the failure in the past to detect G-monosomy, it has been assumed that it results in early abortion or the deficient gamete is incapable of zygote formation.

The only published case of autosomal monosomy has appeared recently in the literature. The phenotypic expression in that

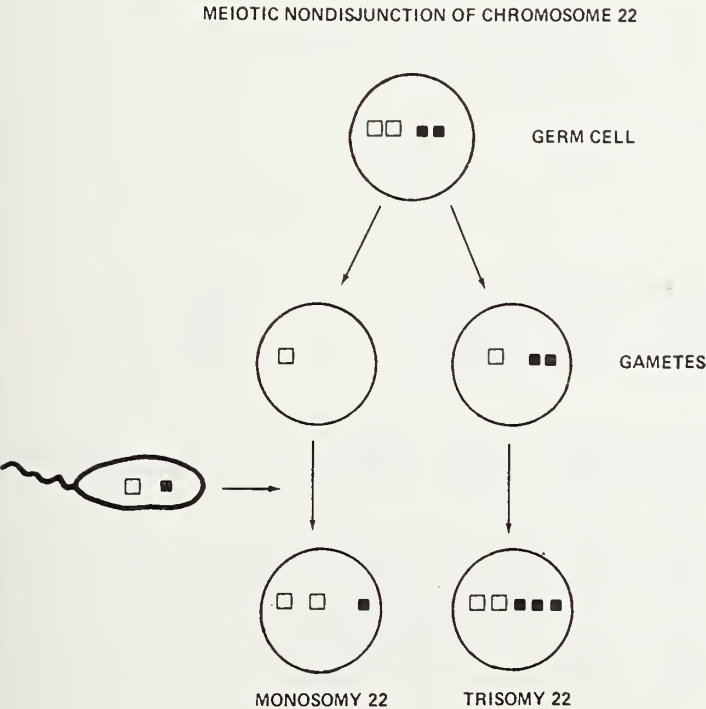


Figure 2.



Figure 3.

case is quite different—the child had hypertelorism, downward slanting eyes, epicanthus, small low-set ears, spastic hemiparesis, severe psychomotor retardation, and a seizure disorder. A possible explanation for the difference in phenotypic expression is that this was presumed to be monosomy for

PHENOTYPE OF FAMILIAL EXTRA LARGE #16 CHROMOSOME

- General:**
  - Hypertelorism, flat nasal bridge
  - Epicanthus
  - Low-set ears
  - Micrognathia
  - Abnormal dermatoglyphics
  - Growth failure
- Central Nervous System:**
  - Mental and motor retardation
  - Left facial paresis, central
- Cardiovascular:**
  - Congenital heart disease (? VSD)
- Gastrointestinal:**
  - Omphalocele
  - Malrotation of bowel
  - Inguinal herniae
- Genitourinary:**
  - Single pelvic kidney
- Skeletal:**
  - Klippel-Feil syndrome
  - Cervical ribs
  - Hemivertebrae
  - Coxa valga



chromosome number 21, while the present case likely involves number 22.

It is possible, but unlikely, that the present case is a mosaic and the mosaicism is not reflected in the peripheral blood. Chromosome analyses of other tissues are planned to test this possibility.

The discovery of a patient with autosomal monosomy presents a unique opportunity to gain information on gene loci contained in the missing chromosome, and preliminary studies have been conducted. The red blood cell phenotype of 15 antigens for the proband and her father and mother are tabulated in Table 2. There is no discordance with respect to these 15 factors indicating that the alleles for them are not contained in the missing chromosome.

The assays for red blood cell glucose-6-phosphate dehydrogenase and 6-phosphogluconic acid dehydrogenase for the proband and her parents are given in Table 3. The values are all within the normal range. Histochemical determination of leukocyte alka-



Figure 4.

FAMILIAL EXTRA LARGE 16 CHROMOSOME

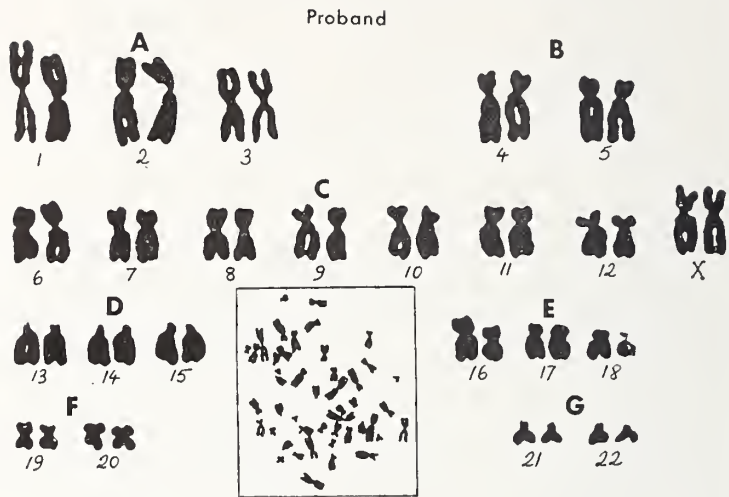


Figure 5.

line phosphatase failed to give conclusive results. Further studies of multiple enzymes in erythrocytes and isolated granulocytes are planned.

The discovery of these two cases of G-monosomy requires a revision of current concepts that autosomal monosomy is incompatible with viability.

I should like to turn your attention now to another unusual chromosome abnormality discovered in these studies. The patient is a 30-month-old white female, originally referred at 14 months of age because of multiple congenital anomalies. She was the product of young parents, neither of whom had had therapeutic x-ray, and there was no history of infertility or abortions. The mother had received I<sup>131</sup> for thyroid studies as a teen-ager, and had been receiving thyroid medication which continued throughout the pregnancy. The family history is otherwise negative.

FAMILIAL EXTRA LARGE 16 CHROMOSOME

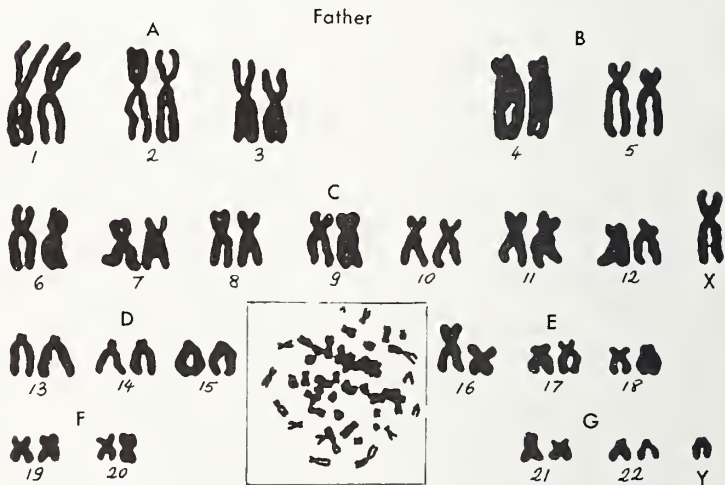


Figure 6.



The child had multiple system anomalies which are listed in Table 4. The facies were abnormal with hypertelorism, flat nasal bridge, and epicanthal folds. The ears were low-set and there was a mild degree of micrognathia. There was a left facial paralysis, central in origin, which had been present from birth. There was growth failure with both height and weight below the third percentile. Dermatoglyphics were abnormal with ulnar loops on all ten fingers, the axial triradii were distally placed. There were no simian lines. She was mildly retarded with respect to motor and mental function. There were findings suggestive of a small ventricular septal defect. Gastrointestinal abnormalities included an omphalocele, malrotation of the small bowel, and inguinal herniae. There was a single malformed pelvic kidney on the right. There were multiple anomalies of the spine including Klippel-Feil syndrome, cervical ribs, and hemivertebrae in the lumbar region. Coxa valga was present.

Figure 3 demonstrates the hypertelorism, epicanthal folds, and a suggestion of the facial paresis. The neck appears to be short. With the child crying, the facial paresis is more evident, and the partially repaired omphalocele and inguinal herniae are prominent (Figure 4).

Chromosome analysis was performed on peripheral blood, and a representative karyotype is shown in Figure 5. Chromosome counts were consistently 46. There were two X chromosomes present. As demonstrated, there is only one normal appearing number 16 chromosome while the one paired with it is considerably larger and approximates the size of a number 12. This morphological abnormality was found consistently in all cells karyotyped. The original interpretation was that the abnormal chromosome likely represented a normal number 16 with part of another chromosome translocated to its long arms. Thus, this would represent a partial trisomic state.

If one or the other of the parents could be demonstrated to be a balanced translocation carrier, this would establish the diagnosis in the patient of a partial trisomic state and would also identify the source of the translocation.

Chromosome analysis was carried out on

FAMILIAL EXTRA LARGE 16 CHROMOSOME

Partial Karyotypes (Group-E)

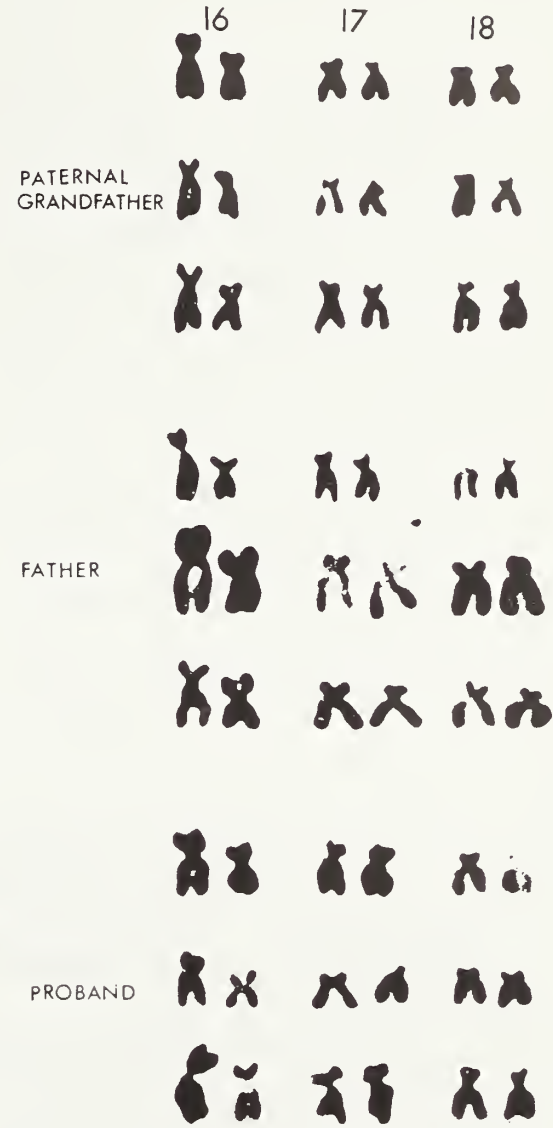


Figure 7.

the parents with normal findings in the mother. A representative karyotype for the father is shown in Figure 6. Chromosome counts were normal with an X and Y chromosome present and he also possesses the same abnormally large number 16 chromosome found in the patient. There is no indication of a deleted chromosome to suggest that he is a balanced translocation carrier.

With this finding in the father, the phenotypically normal paternal grandparents were studied. The grandmother's karyotype is normal. The grandfather's karyotype contains the abnormal number 16 chromosome which is indistinguishable from that in the father and patient. Chromosome analysis is normal for all siblings of the father (one sister) and grandfather (five sisters).

For comparison, three partial karyotypes of the E-group of three different cells from



the proband, her father, and paternal grandfather are shown in Figure 7. The consistency of the extra large number 16 chromosome is evident.

Thus, it appears that an abnormally large number 16 chromosome has segregated out in this pedigree with at least a three generation passage. With the father and grandfather being phenotypically normal, and with a negative family history, it appears possible that the chromosome abnormality is a fortuitous finding and unassociated with the multiple anomalies in the patient.

However, from the information available, one cannot rule out the possibility that the patient has a partial trisomic state and the father and grandfather are balanced translocation carriers. This possibility can be definitely answered by study of meiotic prepa-

arations of testicular biopsy tissue from the father. These studies are planned.

In summary, G-monosomy, a chromosome abnormality thought to be incompatible with life, has been discovered in an infant who has surprisingly few and mild manifestations. This is likely the original description of monosomy-22. There is only one other reported case of autosomal monosomy known to the authors, and the present case corroborates the compatibility of the abnormality with viability.

An abnormally large number 16 chromosome was found in a child with extensive, multiple system anomalies. The abnormal chromosome was also demonstrated in the phenotypically normal father and paternal grandfather. The relationship between the chromosomal abnormality and the anomalies in the proband has not been resolved. □

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## **119th ANNUAL AMERICAN MEDICAL ASSOCIATION CONVENTION**

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Check complete details of the program in the May 4th, 1970 issue of the *Journal of the American Medical Association*.



# Clinical Pharmacologic Studies in Infants and Children

ARTHUR W. NUNNERY, M.D.  
HARRIS D. RILEY, JR., M.D.

*Because the metabolism and interaction of therapeutic agents in the developing and mature individual are different, the methods for evaluating these various parameters in infants and children must be different. This article describes some of these approaches.*

**METHODS** FOR evaluating drug effects are generally considered to be in an advanced state of the art; however, many of these methods are just beginning to be applied to studies in small infants and children.

Studies in these areas of developmental pharmacology must be carried out and are the principle interest of the Pediatric Pharmacology Unit at Children's Memorial Hospital. However, before such normal data are presented, a brief introduction must be made as to how the data were collected, for a large number of religious, medical and lay authorities have correctly stated that the results of such human experiments should be

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reported only in conjunction with information about how the humans were used experimentally.

In this perspective, then, these studies may be considered in four areas as shown in Table 1.

The first is that of helping the parent obtain information about the condition, its present treatment and the drug under study, then instructing the parent in what to expect with the treatment, and in some cases, how to participate in the study.

When this is done, obtaining informed consent is of no particular problem particularly when the study has been well designed. The second aspect applies, adapts and designs procedures to efficaciously study patients receiving the drug, and the third in developing and utilizing effective methods for the detection of drug toxicity. Lastly, results must be applied to as wide a group as possible of subjects by extrapolation, where it is safe to do so.

The first area is not applicable at all to studies in adults. A surprisingly large number of adults readily submit to investigational procedures on themselves, even when there is no therapeutic indication, but, quite understandably, few allow such studies on their children and none will do so unless there is a therapeutic indication. Here is one of the greatest challenges, for federal li-

Table 1.	
AREAS OF STUDY	
Parent Education and Instruction	
Experimental Design of Methods	
Toxicity Surveillance	
Extrapolation of Results	



censing regulations often require such studies on "normal" children, for comparison purposes, before approval. Without them the drug cannot be approved or used. This is but one of the causes for the use of the term "therapeutic orphan." There is no way to tell how many infants and children, if any, are denied benefit of drugs just because no "normal" infants are studied, hence, no federal approval.

One approach to this in the Pediatric Pharmacology Unit has been to study normal functions in children who have generally well accepted indications for therapy. The infant under treatment for hydrocephalus, for example, may well serve for studies of normal renal and hepatic functions—and the parent understands and consents. The child with surgically correctable urinary tract abnormalities supplies spinal fluid at the time of spinal anesthesia for normal blood-spinal fluid studies—and the parent understands and readily consents.

These studies must be designed well enough to give meaningful, precise, accurate and replicated data. Table 2 shows this type data and illustrates the second area—experimental design. In this experiment, a so-called "twin crossover" design was superimposed on treatment with penicillin.

Three or four cases of streptococcal pharyngitis developed in a closed population of some 30 mentally retarded children while they were being studied for hyperactivity. Twelve of these subjects were found to be carriers of the streptococcus and this group was used to test an oral form of penicillin V, using penicillin G as a standard. It was desired to evaluate the effect of gastric acid on the drugs' absorption and the drugs were given when peak acid would be present from a meal. Penicillin G was given in two doses, low and high of 50 and 100 mg/kg and penicillin V was given in two doses, low and high, on the basis of an expected potency of two—that is, twice as much penicillin G would be required as penicillin V. Each drug was administered for five days, each subject received both drugs, hence the total treatment was ten days.

Before any evaluation is ever performed, the test is evaluated for validity. This is

done by evaluating whether or not the level measured was actually increased by increasing the dose and, if so, whether or not it was equally so with both drugs, that is, the regression is parallel. The responses of the same drug when administered on different days is evaluated and from this a conclusion may be reached about how valid the test is. In this test, everything was satisfactory; however, there was a significantly lower response on the second day. The response to either of the drugs on the second day is not independent of the subject having received a drug before. This effect is equal in both drugs due to the type of crossover design used; hence doesn't alter the resultant potency. It does contribute to knowledge for future evaluations.

With validity assured, the potency may be computed, in this experiment 2.37. One mg. of penicillin V equalled 2.37 mg. of penicillin G in the acid stomach's absorption.

Also, with this kind of design, experimental error may be estimated allowing an expression of the degree of confidence in the results. In this case, if the experiment were repeated with a different but similar group of subjects, potency would be expected to be between 1.78 and 3.24, unless a 1 in 20 mischance occurred.

Moreover, this experimental error can be compared to other investigator's results. In this case, the experimental error is quite similar to those obtained by more easily executed designs requiring 24 or more subjects. This experiment used only 12 children and only two finger sticks per patient. They were not normal children, but "normal" values were obtained.

Experimental design, then, becomes a most

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Table 2.

TWIN CROSSOVER  
EVALUATION OF PENICILLIN V SUSPENSION

PATIENT	DAY			
	1		2	
I	4.7	Low G	High G	5.2
II	4.8			4.6
III	3.8			3.4
	13.3			13.2
IV	3.8	High G	Low V	2.6
V	5.3			3.4
VI	3.8			2.9
	12.9			8.9
VII	3.4	Low V	High G	3.4
VIII	2.6			2.4
IX	4.3			4.3
	10.3			10.1
X	3.4	High V	Low V	2.2
XI	4.0			2.5
XII	3.9			1.8
	11.3			6.5
TOTAL	47.8			38.7

Standard Drug: Penicillin G Suspension

VALIDITY EVALUATION

- 1. Different response from different dose of each drug.
- 2. These responses are parallel.
- 3. Responses are the same on the first and second day.

POTENCY 2.37 95% Confidence Limits

1.78

3.24

1 Milligram Penicillin V = 2.37 mg. Penicillin G

important aspect. It is a fact that investigators in pediatric pharmacology almost always have more graduate work in biostatistics than in pharmacology. This has been for practical reasons. To quote from the first sentence of the first page of the first chapter on procedure for penicillin assay in a standard textbook on bioassay:

“Under sterile conditions, draw 10 cc. blood at 0, 1/2, 1, 2, 4, 6, and 8 hours—”  
This is 70 cc. easily obtained from the adult for whom it was designed, but fatal exsanguination for some infants and very dangerous for many others. Repeating the test at the end of the treatment doubles, or more than doubles, the complications. To circumvent this, certain miniature and micro techniques have to be utilized and even developed. With these, similar data are obtained as that obtained with 70 ml. but using less than one ml. This requires micro-pipetting equipment which has been developed in the CORE laboratory of the CRC. By these mechanisms and design techniques and procedures, data are obtained with the same accuracy and precision as those obtained

from five to ten times that number of adults.  
The third problem area concerns toxicity surveillance and this type data is shown in Table 3. It is relatively easy to imply that serious major effects have occurred when the surveillance parameters become markedly abnormal. It is quite another thing to detect minor changes which herald forthcoming major problems. These minor changes are being studied by evaluating

Table 3.  
HOMOGENEITY OF VARIANCE  
BLOOD UREA NITROGEN

SUBJECT	Number of Specimens (DF + 1)	Average Value	VARIANCE
1	8	9.2	.695
2	8	9.8	.821
3	8	12.0	.983
4	4	13.0	.621
5	6	13.1	.796
6	7	14.8	.891
7	5	15.0	.645
8	4	16.3	.768
9	3	18.0	.848
10	8	19.2	.887

Bartlett's CHI SQUARE = 1.305  
(Not Significant)



Table 4.		
BLOOD UREA NITROGEN		
Before	During Third Week	STANDARD DEVIATION FOR DIFFERENCE
17.8	18.7	Between Two Means = 0.867
16.2	19.8	Difference in Means
14.4	19.2	T = $\frac{\text{S.D. of Difference}}{19.2 - 16.2}$
Average	16.2    19.2	T = $\frac{0.867}{0.867} = 3.5$

baseline parameters in normal infants and prematures. The most fruitful aspect of this so far has been the determination that standard deviations of many parameters are constant as is shown in this table. Although the averages range from 9 to 19, the variances are remarkably similar and, applying Bartlett's test for homogeneity, they can be assumed to be from the same common population.

An example of how this is used is shown in Table 4. These are BUN values for a three-month-old infant. Those obtained before treatment have a mean of 16.2. During treatment with a potentially nephrotoxic agent, BUN's were obtained three times weekly and no change was noted until the third week when the average rose to 19.2. This is still within normal limits; however, the "t" value is too high, indicating that the probability is less than 1 to 100 that these values could come from a patient in the same situation as before treatment. This one was fairly simply resolved for the formula had been changed to whole cow's milk and the increased protein food was responsible.

This constant standard deviation, 0.867, obtained from many previously tested infants alerted us to a change in our study infant, although in this instance, not a serious one.

This type surveillance is applied to SGOT, alkaline phosphatases, serum levels, urine levels or any parameter which may show or indicate toxicity.

A word about side effects. These are real for any drug and almost always dose related. Figure 1 shows how these are evaluated. This example is gentamicin sulfate

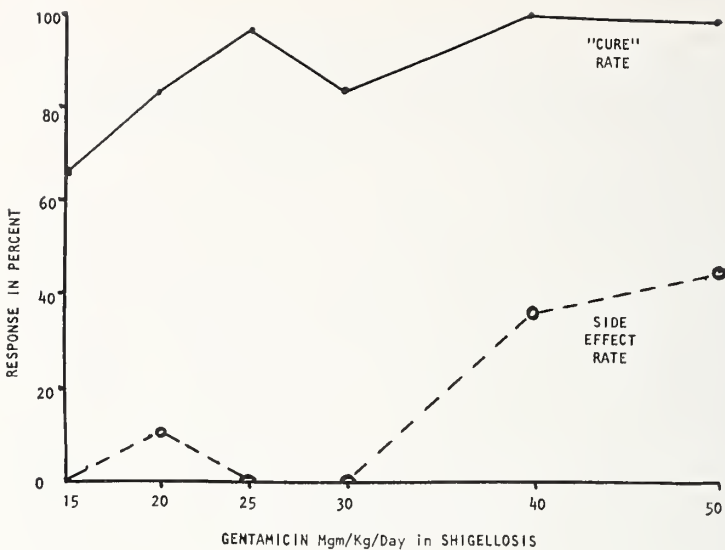


Figure 1.

given orally in doses effective for shigella enteritis. The percent "cure" rate is shown and also the percent with side effects, in this case *Candida* overgrowth. From this type correlation, doses are chosen which, when possible, are tolerated well and are effective. This is one example of how this is determined.

Finally, a word about extrapolation of such results. This is where the ice is very thin. Most drug's metabolism and excretion are determined by metabolic rates, glomerular filtration, hepatic conjugation, all of which, when mature, vary as the child grows but not necessarily in a linear fashion as his weight. The dose in Figure 1 is so high the manufacturer suggested the study be discontinued; such doses would not be tolerable in any adult. Yet the dose, based on the relative surface areas, was identical to an adult's. All of these factors must be considered when the results are extrapolated. It would be preferable to study the desired population, but they are not always available and, even when they are, one of them must receive the first dose, hence some starting dose must be chosen by extrapolation. There are, of course, populations which must be studied where extrapolation is of no benefit such as prematures or infants with varying and unknown degrees of immature renal and hepatic function.

These, then, are the methods used and which should be used to evaluate drugs in infants, with some data as demonstration. □



# Correlative Study of Renal Function and Serial Urine Osmolalities Following 14-Hour Fluid Deprivation

PAUL E. DONAT, M.D.  
DONALD D. ALBERS, M.D.  
WILLIAM L. PARRY, M.D.

*The fourteen-hour concentrated urine osmolality shows promise for screening and monitoring renal function in children and correlates with the creatinine clearance in early impairment.*

IT HAS APPEARED for years in the practice of pediatric urology that we need a simple renal function test that is more sensitive than the blood urea nitrogen. Recently when we reviewed a group of patients seen by us for vesicoureteral reflux, it became evident that a significant number had had an insidious onset of renal impairment. Many of these patients had been followed for several years by their local physicians for evaluation of growth failure, enuresis, or some similar problem. All had had multiple urinalyses, blood counts, and repeated blood urea nitrogens which had been within normal limits. Only after therapy of the presenting complaints had been unsuccessful

were the patients referred for studies which identified the underlying problem.

Figure 1 represents the x-ray diagnosis on one of the children referred to us. This is a two-year-old white male who had been followed by a local physician for twelve to fourteen months for enuresis. Urinalysis, blood counts and blood urea nitrogens had been normal. Intravenous pyelogram revealed what appeared to be an essentially normal upper urinary tract. Cystoscopy and cystourethrogram revealed an early bladder neck contracture, a hutch-type diverticulum at the left ureteral orifice and vesicoureteral reflux on the left side. The corrected creatinine clearance on this child was 70 cc./min., which is approximately one-half normal. Obviously, this patient's problem did not present overnight.

This case demonstrates the need for a more refined renal function test than the blood urea nitrogen which can be used on an out-patient basis. Figure 2 compares the blood urea nitrogen levels on the ordinate to the glomerular filtration rate calculated as the creatinine clearance on the abscissa. As we follow the curve from the right side of the graph across to the left, we notice that at approximately 50 percent decrease in the glomerular filtration rate, only a slight elevation is noted in the blood urea nitrogen. A significant elevation above the line of normal is not noted until approximately two-thirds of the glomerular filtration rate has decreased. This illustrates what is obvious

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and what most have known—that the blood urea nitrogen is a poor index of renal function until a large percent of function has been lost.

For this reason, we reviewed the more commonly used clinical renal function tests, which are presented in Figure 3. Areas of nephron measurement are presented in the left hand column, and these encompass the glomerular filtration rate, renal plasma flow, and tubular transport. Specific tests of renal function are given in the central column. As a rule, these tests are research tools which are not practical to use as office procedures. Of all the tests presented here, the concentration and dilution tests occupy a rather unique position, in that they are tests which can be done as spot tests and require no time during collections. It is obvious from reviewing these tests that no one test measures renal function as a whole. However, tests which measure the glomerular filtration rate tend to mirror the renal plasma flow and tubular transport when related to filtration fractions and filtered loads. Clinically, the measurement of the glomerular filtration rate is done by calcu-

lating the creatinine clearance. Often on a clinical level, this is considered as a measurement of total renal function.

According to the common equation for calculating clearances, the clearance of the substance is equal to the product of the urine concentration of the substance times (X) the volume of urine excreted divided by the time period. This product, then, is divided by the plasma concentration of the substance measured. It becomes evident while examining this equation that, besides having accurate laboratory values, proper urine collection is necessary to produce reliable results. In the pediatric-age-group patient, the collection may often be the most difficult value to obtain. Unlike the adult who can be reasoned with, and usually relied upon, 1) to start a urine collection at a given time, 2) end it at a given time, and 3) produce complete voidings, the pediatric patient usually requires conditioning. Under the stressful supervision of a nurse who is foreign to the child, the child may often void only slightly more than one-half the bladder volume. Again referring to this equation, a reduction of one-half volume here would introduce an error of approximately 50 percent, which would indicate severe renal dis-

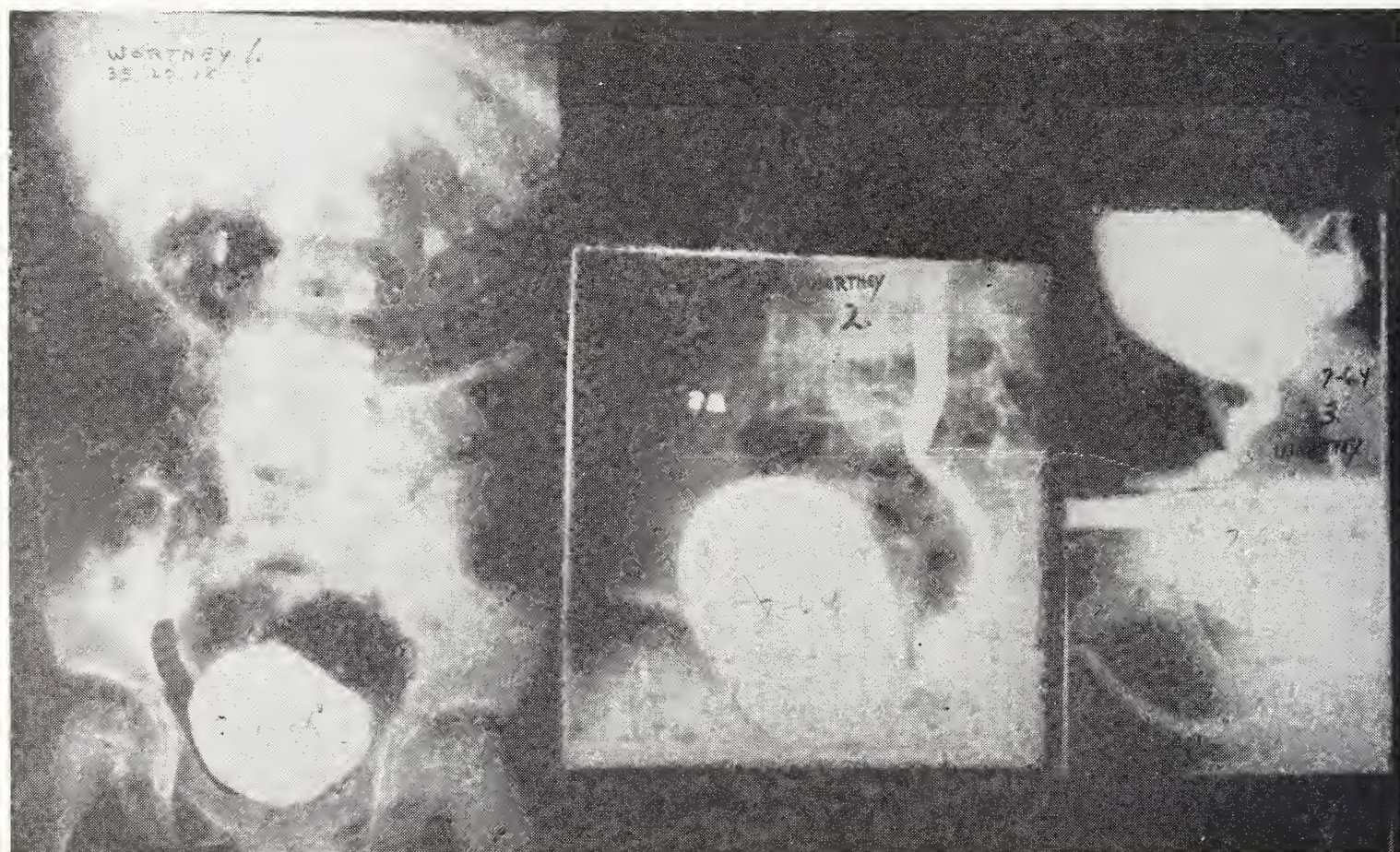


Figure 1. I.V.P., cystogram, and urethrogram on two-year-old boy, showing left reflux and dutch diverticulum.



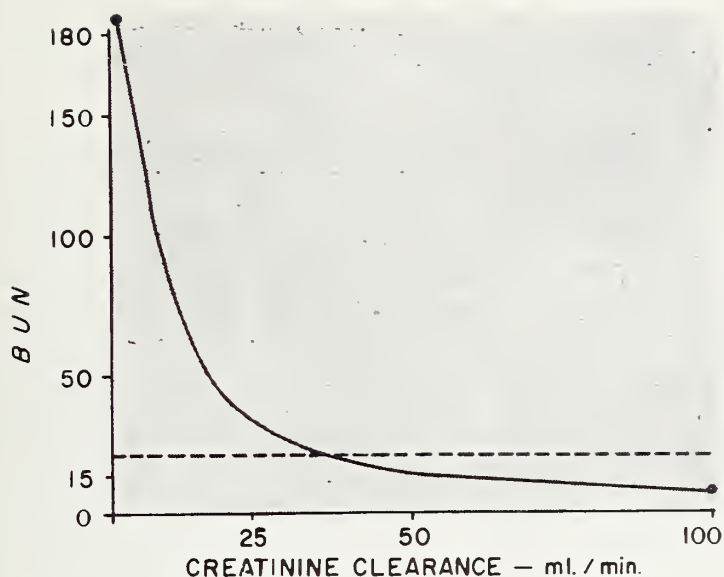


Figure 2. Relationship between creatinine clearance and blood urea nitrogen (BUN).

ease where no disease may be present. It is the experience of many of the practicing urologists today that besides the error produced in the office in urine collection, it is often difficult to obtain correct time periods. In utilizing one or two-hour urine collections, a time error of 10-20 minutes could introduce as much as a 30 percent change in the value when used here as the dividend. This could indicate adequate renal function in certain cases where a true disease state might exist. Therefore, in the busy office practice, the time and energy required and the low yield of accuracy often necessitates this rather simple and informative lab test to become a hospital procedure. Consequently, the selection of patients is limited and renal disease which is silent may go undetected because the clinician feels forced to rely upon the

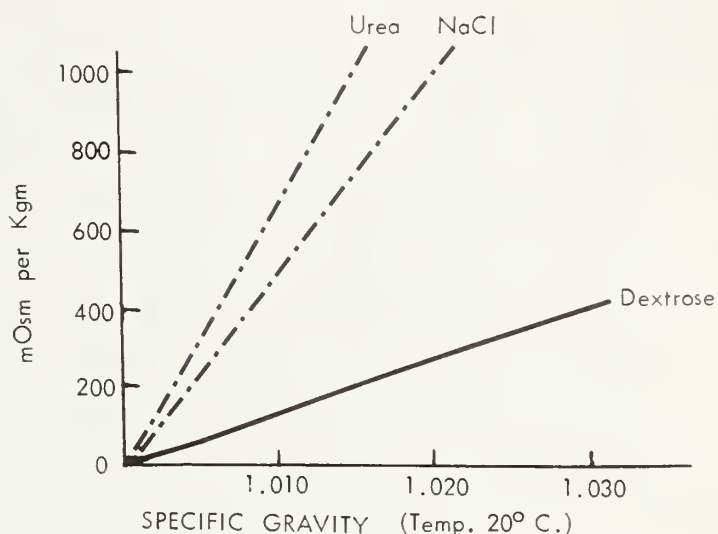


Figure 4. Comparative influence of pure solutions of three common constituents found in urine on osmolality and specific gravity.

blood urea nitrogen.

This is our reason for reviewing the basic function test—to see if the screening procedure could be derived which would: 1) have a broader scope of measurement of renal function than the blood urea nitrogen, 2) be simpler to negotiate in pediatric patients than clearance studies, 3) be easily obtainable in an office practice, and 4) be reliable and reproducible. Due to the difficulty in obtaining timed urine collections and plasma samples when doing clearance studies, we were directed to urine concentration tests.

Although it is standard practice in doing urinalyses to evaluate urine specific gravity, it has only been in recent years that the measurement of urine osmolalities has become practical. Figure 4 compares pure so-

### RENAL FUNCTION TESTS

Function	Specific tests	Clinical tests
Glomerular filtration	Inulin clearance	Creatinine clearance Urea clearance Plasma creatinine Plasma urea
Renal plasma flow	PAH clearance Diodrast clearance	PSP excretion
Proximal tubular transport	T <sub>m</sub> glucose (reabsorptive) T <sub>m</sub> PAH or T <sub>m</sub> Diodrast (secretory)	PSP excretion
Distal tubular transport	Concentration and dilution T <sub>C</sub> H <sub>2</sub> O, C <sub>H2O</sub> Maximal and minimal U/P osmolality	Concentration and dilution Maximal and minimal specific gravity

Figure 3. Examination of renal function tests.



PROTOCOL FOR URINE OSMOLALITY STUDY

Selection:

1. Age: 3 months old or older
2. No acutely ill patients
3. All patients previously evaluated

Procedure:

1. Patients are admitted to hospital and fed routine diet with 2-3 gm. salt intake.
2. Fluid deprivation and urine osmolalities are done on the 3rd, 4th and 5th hospital days.
3. 24 hour creatinine clearances are done on the 6th and 7th hospital days.

Figure 5.

lutions in varying concentrations of some of the more common constituents found in the urine. The osmotic effect of these solutions is presented in measurement of osmolality on the ordinate. The increments of measurement on the ordinate are 200 milliosmoles/unit. There is no temperature calibration required for this measurement, and the accuracy of the measurement is within three milliosmoles per kg. On the abscissa is the measurement of the common specific gravity test and this is divided into units of ten 1/1000. This measurement is done with temperature regulation, and both the glassware and the solutions used must be held constant at 20° C. It is evident from this graph that two of the major particulate substances found in urine, urea and sodium chloride, exert a rather high effect on the urine osmolality, while effects seen on specific gravity is low. Substances such as dextrose or protein, which may exert a high effect on the specific gravity, may mirror a low urine osmolality.

Obviously, only a clearance test can measure the glomerular filtration rate. It would seem possible that a renal concentrating ability test might be used to infer the degree of renal function. If the nephron is intact, the ability of the kidney to concentrate urine should be dependent upon the amount of solute delivered to the ascending loop of Henle and the distal nephron. The amount of solute delivered to this area is directly dependent upon the renal blood flow and the filtered load of solute. Therefore, it might be possible to infer relationship between the glomerular filtration rate and the renal concentrating ability. Despite numerous studies dealing with various phases of renal concen-

trating mechanism, relatively little data are available concerning the concentrating capacity in infants and children.

In our pilot study, we decided to utilize the urine osmolality in a concentration test, and derived the following protocol (Figure 5). Our selection of patients has been between three months of age and fourteen years of age. Due to the reported instability or immaturity of function in the infant, it was thought that utilizing younger patients would be confusing. Also, the large extra-cellular to intra-cellular fluid ratio might produce an unnecessary risk during the fluid deprivation periods. Due to the ability to understand and ease of collecting specimens, preference was given to pediatric patients over two years of age. No patients were taken on the study while acutely ill; however, once baseline studies were accomplished, some patients had repeat studies during acute infections to appreciate the change of the parameters of evaluation. All patients had been previously evaluated urologically. Not all patients were normal, and some were azotemic. Our procedure consisted of admitting the patient to the hospital for several days prior to the study. They

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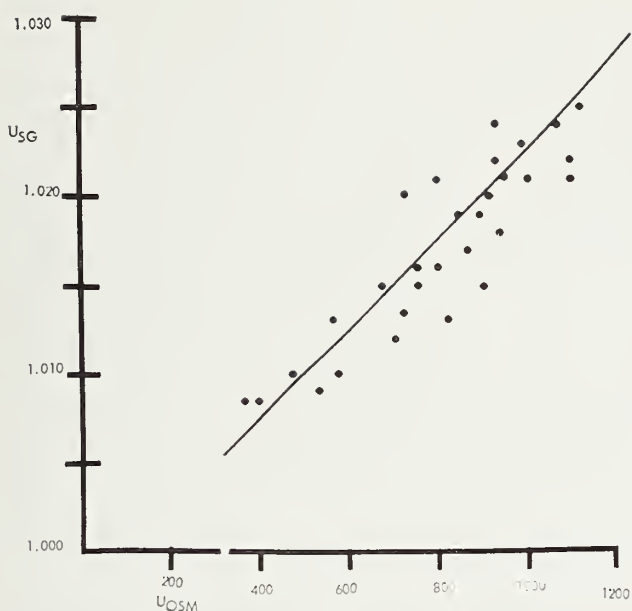


Figure 6. Comparison of urine osmolalities and specific gravities after 14-hour concentration.

were placed on a 2-3 gm. salt intake and allowed time to familiarize themselves with their new environment and be conditioned for urine collections. Fluid deprivation studies were begun on the third hospital day. All oral intake was stopped after the patient's evening meal at 6:00 p.m. the preceding day. At 8:00 a.m. the following morning, the patient voids and this specimen is discarded. No fluids are given until the next voiding. The second voiding is utilized as our concentration sample. This period of fluid deprivation is only a few hours longer than the usual overnight fast, and would be of easy working ability on an outpatient basis. The second voided specimen tends to eliminate mixing with residual early evening hypotonic specimens.

After obtaining the three urine osmolality

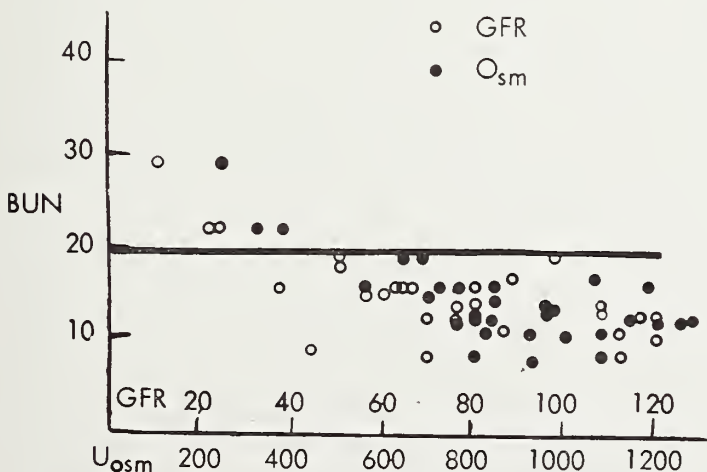


Figure 7. Comparison of BUN to glomerular filtration rate (creatinine clearance) and concentrated urine osmolality.

REPRESENTATIVE DATA URINE OSMOLALITIES

	1	2	3
J. R. H.	676	564	750
D. L.	943	964	675
D. M.	1047	1062	1090
A. S.	965	896	905
R. M. L.	767	729	824
R. B.	549	590	611
A. R. T.	762	784	826
S. L.	1300	1278	1263
C. S.	341	391	392
M. P.	855	839	871
C. J. M.	460	474	460

Figure 8. Comparison of three 14-hour concentrated urine osmolalities on consecutive days.

specimens, 24-hour creatinine clearances were done. The 24-hour clearances were utilized to increase the volume of urine and decrease the error for urine loss. To obtain more accurate collection of urine, the patients were hospitalized in the Clinical Research Center where closer nursing supervision is given.

The graphs present some data we have obtained to date on this preliminary study. Figure 6 compares the specific gravity of urine on the ordinate to the osmolalities from our patients after 14 hours of fluid deprivation on the abscissa. It's rather obvious that the increments of measurement here, being 200 milliosmoles, are a little finer than the measurement made with the specific gravity. Also, it is noted on this graph that a relatively high urine osmolality of approximately 800 milliosmoles may be present, and yet be mirrored by a relatively low specific gravity. In order to obtain a significant osmolality—a high osmolality—the specific gravity has to read above approximately 1.025.

Figure 7 is a graph plotting the blood urea nitrogen on the ordinate to the glomerular filtration rate and the urine osmolalities following the 14-hour fluid deprivation period on the abscissa. Glomerular filtration rate is presented in clear circles; each circle on the graph represents an individual patient. The line across the center of the graph represents what is thought to be a normal for the blood urea nitrogen. As we follow the clear circles (the glomerular filtration rate) across the graph in these patients, we see that the curve is approximately the same as the graph presented previously (Figure 2). We then took the urine os-



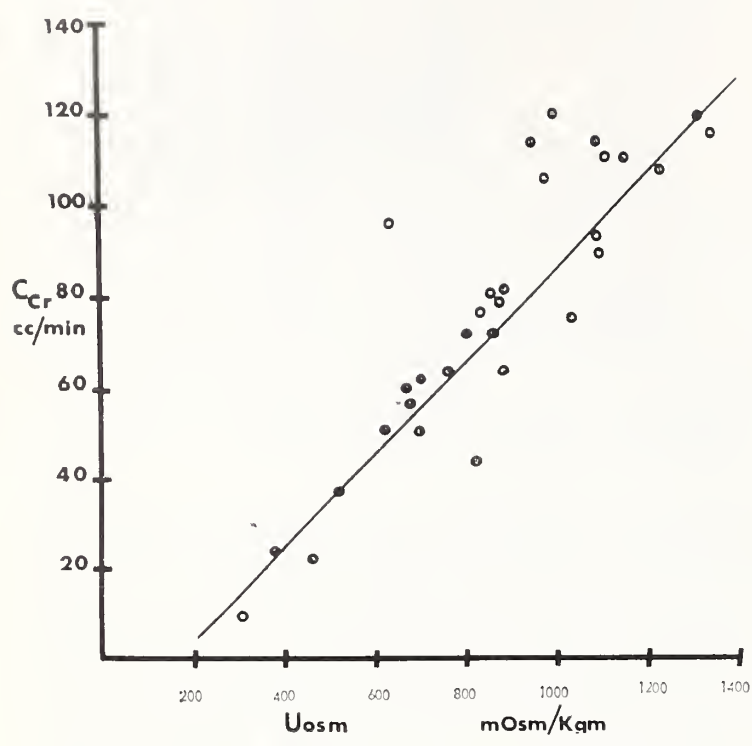


Figure 9. Comparison of creatinine clearance and 14-hour concentrated osmolalities.

molalities from our patients, as solid dots, and superimposed them on this graph and produced a curve that was essentially the same as the glomerular filtration rate. It is obvious from looking at this that the blood urea nitrogen really did not mirror the subtle changes that could be found in the glomerular filtration rate or the osmolalities, as elevation really didn't occur until both of these were in the decreased range.

Figure 8 represents a section of our 31-patient pediatric population to evaluate the reproducibility of our urine osmolalities. The column numbers 1, 2 and 3 represent consecutive days of collection of the urine osmolalities. In general, these osmolalities are reproducible. Patients who have readings below 900 milliosmoles tend to have better reproducibility than those who are above. Our thinking on this is that the 14-hour fluid deprivation period has dehydrated these patients who have a decreased glomerular filtration rate, while the patients with better renal function may not approach their maximum urine osmolality. In the first and second patients are noted inconsistent data, and after we reviewed these patients trying to figure out why data like this appeared, we found out that they had their creatinine clearances done prior to the collections of these osmolalities. The first pa-

tient had his creatinine clearance studies done prior to the second day, and the second patient had his clearance studies done prior to the third day. We feel that probably the high fluid intake during our creatinine clearances as we forced fluids on these patients, has probably washed much of the solute from the medullary portion of the kidney, and resulted in a decreased concentrating ability. Again, the daily osmolalities on our patients have been reproducible except in cases where high fluid intake preceded the dehydration, and in patients who have had repeat studies done over a period of several months, both the creatinine clearances and the osmolalities have been reproducible.

Figure 9 relates the creatinine clearance on the ordinate in cc. per minute to the urine osmolality on the abscissa, given in milliosmoles per kg. Each point on the graph represents the osmolality and the creatinine clearance of an individual patient. The creatinine clearance is corrected to the body surface area of 1.73 square meters, using the DuBois surface area nomogram. On this graph, a linear correlation appears to exist between the creatinine clearance and the urine osmolality, and this would indicate that the ability to concentrate urine is dependent upon the glomerular filtration rate or on some common factor. Splay exists in areas of high clearances, and the osmolalities in this range do not really get quite as high as you would expect for the glomerular filtration rate. Again, this is thought that the 14-hour fluid deprivation period has not caused the good kidney to approach its urine maximum osmolality. The curve appears to be fairly consistent in the lower ranges and may better mirror the glomerular filtration rate. If used as an office screening procedure, it would seem that in an area 900 milliosmoles and below, the correlation appears to be good, and above 900, renal function is probably adequate. We would think at this time, from our data, that the patients who fall in the area below 900 milliosmoles would warrant further investigation. To date, the number of patients which have been followed over a period of time for a comparison of renal function is small, and in general, the procedure has proved to be reliable in correlating the glomerular filtration rate except in patients with acute urinary tract



infections. This may be due to the area of the nephron involved in infection, which tends to be the papillary portion of the kidney which regulates urine concentration.

To summarize this pilot study, we would draw these conclusions: 1) this is a pilot study evaluating the feasibility of utilizing a modified concentration test to evaluate

renal function; 2) data presented reveal a linear correlation between the urine concentration test and clearance data; 3) a linear correlation is present between urine osmolality and specific gravity; and 4) this test may be used as a screening procedure for renal function and in selecting children who warrant further investigation.

### NOTEWORTHY

**Avco Corporation has decided to do something to help individual Americans have their say.** In full page newspaper ads, Avco announced that it is turning over its television time to individual Americans who have something fresh and original to say to their countrymen. Avco is not interested in movie stars, noted authors, celebrated activists or official spokesmen for lobby or pressure groups. Avco wants to hear from the individuals who have something to say and the courage to say it. This year they hope to put 50 speaking Americans on television.

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**A dues increase for the AMA** will be submitted to the AMA's House of Delegates at its annual convention, June 21-25, in Chicago. Recommended by the AMA's Board of Trustees, the increase of \$80 would become effective January 1st, 1971, if adopted by the House. The last AMA dues increase was in 1967.

**Another recommendation to the AMA** House of Delegates would be to change the AMA's policy on abortion. Present policy opposes induced abortion except for therapeutic reasons and under certain conditions. The AMA Board of Trustees pointed out that in recent months several states have amended their laws to prevent abortion for reasons other than therapeutic, with the result that many physicians find themselves unable to perform a legalized medical procedure without violating AMA policy. The board proposes a new policy to permit the decision to interrupt pregnancy to be made by the woman and her physician, but that no physician be required to perform an abortion and that no hospital be required to admit a patient for abortion. □



## *Proficiency Testing in Oklahoma Physicians' Office Laboratories*

RAYMOND F. HAIN, M.D.

*It has been alleged the worst of all laboratory work is done in the private doctor's office. This report of the OSMA Laboratory Quality Committee suggests this allegation is not necessarily true.*

FOR THE PAST several years there has been considerable concern regarding the quality of medical laboratory services. Initially, this was directed at hospital and independent laboratories. More recently, it has been directed at the physician's office laboratory. "With perhaps a few exceptions, the worst of all laboratory work is done in the private doctor's office," proclaimed Doctor Morris Schaeffer of the New York City Department of Health.<sup>1</sup> Lest the reader be apprehensive that this report is an indictment against the physician's office laboratory, let me hasten to assure him it is not. On the contrary, it is an indictment against such allegations; for the experience reported here is considerably more favorable than most authorities would have predicted. This is not to imply that there is no room for improvement—for there is; nor is it to suggest that such allegations are totally without substance—for there are published data which suggest they have some merit. To date, however, I know of no published data which relate specifically to the quality of work in the physician's office laboratory.

In 1968 the Oklahoma State Medical Association created a Laboratory Quality Committee to address itself to this area of medical laboratory activity. The committee decided as its initial effort to invite Oklahoma physicians to participate in a voluntary proficiency testing program made available through the College of American Pathologists. The purpose of this program was twofold: One, to ascertain the magnitude of the alleged problem and two, and more importantly, to use the information obtained to plan educational programs to correct deficiencies that might become apparent. Twenty-five clinics, representing 200 Oklahoma physicians, elected to participate in the program. This is an analysis of their performance.

Each participating clinic received four sets of check samples during 1969—one in March, one in May, one in August and one in October. Each set included two concentrations each of bilirubin, calcium, cholesterol, glucose, potassium, sodium, urea nitrogen, uric acid and two concentrations of hemoglobin for analysis. Two of the four sets included prothrombin time check samples, three included a bacteriology specimen, one included a urine specimen and one included an immunohematologic specimen. Figure 1 is a composite summary of the reported results of the participating clinics. Of 1,176 reported values only 12.7 percent were technically unacceptable and only 5.7 percent were regarded as medically misleading. This is an excellent performance. The differences appearing in the number of reported results is a reflection of the limited number of pro-



Figure 1.

SUMMARY OF VALUES REPORTED BY OSMA MEMBERS  
PARTICIPATING IN 1969 COLLEGE OF AMERICAN  
PATHOLOGISTS PROFICIENCY TEST SURVEY

Constituent	Number Values Reported	Percent Good Performance	Percent Technically Unacceptable	Percent Medically Misleading
Glucose	180	79.4 %	13.9 %	6.7 %
Calcium	28	67.9 %	28.6 %	14.3 %
Bilirubin	128	75.8 %	14.1 %	1.6 %
Cholesterol	168	82.7 %	9.5 %	1.8 %
Urea Nitrogen	156	82.1 %	10.3 %	3.2 %
Uric Acid	162	77.2 %	14.8 %	10.5 %
Hemoglobin	178	82.3 %	11.2 %	2.2 %
Bacteriology	23	26.1 %	43.5 %	43.5 %
Urinalysis	84	85.7 %	3.6 %	2.4 %
Immunohematology	52	76.9 %	9.6 %	7.7 %
Infectious Mononucleosis	17	76.5 %	23.5 %	23.5 %
GRAND TOTAL	1176	79.0 %	12.7 %	5.7 %

cedures done in some of the participants' office laboratories. None, for example, did sodium or potassium studies, only eight did the bacteriologic studies and a limited number did the immunohematologic analysis. The criteria for evaluation of the reported test results are detailed in Appendix A. It is important to distinguish between the terms "technical acceptability," and "medically useful acceptability." For example, if a urea nitrogen check sample had a mean value of 16 mgs. percent with a standard deviation of one mg. percent, the technically acceptable range would be 14 to 18 mgs. percent. If a laboratory reported a value of 13 mgs. percent, this would be technically unacceptable. It would not, however, be medically

unacceptable as such value would not mislead the physician in the treatment of his patient. If, on the other hand, the reported value was 35 mgs. percent, this would be both technically and medically unacceptable. The designation of a reported value as medically misleading was done by the OSMA Laboratory Quality Committee. Admittedly, in some instances, these were arbitrary decisions; and in most instances it was necessary to assume that the reported value was an initial study.

The excellent performance in 1969 may not reflect the true over-all performance of all physicians' office laboratories as this was a voluntary program and may represent the better clinic laboratories. It is, however,

Figure 2.

SUMMARY OF VALUES REPORTED BY OKLAHOMA SMALL  
HOSPITALS PARTICIPATING IN 1969 COLLEGE OF  
AMERICAN PATHOLOGISTS PROFICIENCY TEST SURVEY

Constituent	Number Values Reported	Percent Good Performance	Percent Technically Unacceptable	Percent Medically Misleading
Glucose	432	90.5 %	5.3 %	1.2 %
Calcium	194	82.0 %	8.2 %	4.1 %
Bilirubin	360	89.4 %	6.4 %	0.8 %
Cholesterol	370	84.1 %	9.5 %	2.2 %
Urea Nitrogen	415	91.3 %	4.3 %	0.5 %
Uric Acid	352	92.3 %	4.5 %	2.0 %
Hemoglobin	430	87.7 %	4.9 %	0.5 %
Bacteriology	96	24.0 %	33.3 %	29.2 %
Urinalysis	214	86.9 %	4.2 %	1.9 %
Immunohematology	462	91.8 %	5.0 %	1.5 %
Infectious Mononucleosis	41	90.2 %	9.8 %	9.8 %
GRAND TOTAL	3366	87.2 %	6.5 %	2.3 %



Figure 3.

IMPACT OF QUALITY CONTROL PROGRAM  
ON LABORATORY PROFICIENCY TESTING  
COMPARATIVE SUMMARY OF PROFICIENCY TEST  
PERFORMANCE OF PARTICIPATING HOSPITALS

Proficiency Test Material	1966 Performance*			1969 Performance**		
	Number of Values Reported	Percent Technically Unacceptable	Percent Medically Misleading#	Number of Values Reported	Percent Technically Unacceptable	Percent Medically Misleading#
Hemoglobin	48	59	25	430	4.9	0.5 %
Blood Chemistries						
Urea Nitrogen	44	57	25	415	4.3	0.5 %
Glucose	47	13	2	432	5.3	1.2 %
Uric Acid	43	11.6	4.6	352	4.5	2.0 %
Calcium	25	36	24	194	8.2	4.1 %
Bilirubin	37	19	10.8	360	6.4	0.8 %
Cholesterol	47	10.6	10.6	370	9.5	2.2 %
Bacteriology†	75	57	57	96	33.3	29.2 %

\*Initial check sample reported by each participating hospital in 1966.  
\*\*Composite of four check samples, each with two concentrations, reported by each participating hospital in 1969.  
#Values that would mislead physician in care of his patient.  
†Composite of two check samples in 1966 and three check samples in 1969.

the first objective information obtained to date. To appreciate the significance of this fine performance, one need only look at the figures reported in 1967 by Doctor David Sencer, Director of the National Communicable Disease Center of the United States Public Health Service.<sup>1</sup> He stated that laboratory test error may run as high as 25 percent with errors ranging from 12 percent to 18 percent in blood grouping and typing, 20 percent to 30 percent in hemoglobin measurements, 10 percent to 40 percent in bacteriologic testing and 30 percent to 50 percent in various simple clinical chemistry tests. Much of his data were derived from federally operated laboratories and from studies reported in the 1940's. A survey of

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6,000 tests performed in 170 Canadian laboratories in 1963 revealed 47 percent of the results reported were outside the limits of acceptable error and 22 percent of these were five times greater than the allowable limits of error.<sup>2</sup> A survey of hemoglobin determinations in 1963 performed in 398 laboratories throughout the United States revealed 33 percent were outside the acceptable limits of error.<sup>3</sup> A New York State survey extending over a 21 month period from July 1965 to March 1967 demonstrated a direct correlation with the quality of laboratory performance and the size of the laboratory. Those hospital and independent laboratories doing more than 100,000 tests annually had a 100 percent satisfactory performance, whereas those doing less than 1,000 tests had only a 40 percent satisfactory performance.<sup>4</sup> Statistics such as these prompted the concern regarding medical laboratory tests, including those done in the physician's office laboratory.

While the over-all performance was quite good, a perusal of Figure 1 reveals areas in which performance was poor. Bacteriology, blood calcium and uric acid are specific examples of such. In those areas where the performance was good, one must also ask, "is this the best that can be done?" Not



necessarily, say the data in Figure 2 which summarizes the performance of a group of Oklahoma small hospitals participating in this same survey. They reported 3,366 values with but 6.5 percent being technically unacceptable and only 2.3 percent medically misleading. Since 1966 this group of hospitals has been participating in a daily quality control program supervised by a group of Oklahoma pathologists.

While proficiency testing calls attention to laboratory errors, it does not necessarily correct them, nor does it ensure reliable day to day performance. To be certain of the day by day performance in a medical laboratory, a total quality control program is essential. That such a program can have a significant impact in improving the performance of medical laboratory procedures is evident in Figure 3 which compares the performance of proficiency testing of this same group of Oklahoma small hospitals in 1966 and 1969. The improvement is most dramatic.

The OSMA Laboratory Quality Commit-

tee is currently developing educational programs to help ensure reliable laboratory performance in the physician's office laboratory. The first of these, a Seminar on Quality Control Procedures for the Doctor's Office Laboratory, was conducted for the 1969 participants on March 15th of this year. The Committee hopes to expand these programs and to make them available to other members of the state medical association in the future. Your recommendations and suggestions are welcome. It is encouraging to note that 79 Oklahoma Physician's Clinics, an increase of 316 percent, will be participating in the 1970 College of Pathologists Proficiency Test Surveys.

Laboratory Quality Committee, Raymond F. Hain, M.D., Oklahoma City, Chairman; Dale E. Van Wormer, M.D., Tulsa; James Todd, M.D., El Reno; A. Standley Porter, M.D., Oklahoma City; F. R. Hassler, M.D., Oklahoma City; Norman A. Cotner, M.D., Grove; Paul A. Leap, M.D., Enid; John L. Hackney, M.D., Edmond; Jerold D. Kethley, M.D., Shawnee; and Robert P. Metcalf, M.D., Hollis.

## EVALUATION OF RESULTS

### Tentative Guidelines For The 1969 Survey

#### I Chemical Measurements

##### A. Chemical measurements other than enzyme tests.

The Standards Committee and its Subcommittee on Surveys uses the current "State of the Art" concept for setting guidelines of good and acceptable performance. This concept is applicable since several interesting factors affect laboratory performance in a survey. Some of the factors are:

1. Stability of lyophilized sample
2. Availability of suitable standards
3. Use of automated vs. manual methods
4. Inherent error of the method
5. Variability which is bound to occur when hundreds of laboratories perform an analyses using different analysis and instruments.

In the opinion of these committees, guidelines for good performance must not be unduly restrictive if all the variable factors involved in laboratory testing are not well defined. Evaluation based on the "State of the Art" concept takes into account all the factors which may affect laboratory results and the limits of performance are established in the following manner.

1. Laboratory results are grouped by method; for example, glucose values by Somogyi-Nelson method constitute one group; results derived by glucose oxidase method, another

group. The method must be used by 20 or more laboratories to obtain valid statistical data.

2. The mean and standard deviation is calculated for each method. Values outside  $\pm 3SD$  are excluded. Approximately two percent of values usually lie outside  $\pm 3SD$  of the mean and these may represent clerical errors in the laboratory or in transferring information from the questionnaire to computer cards.
3. The remaining values are used to set limits of performance. After exclusion of "outliers," the mean and SD are recomputed. Good performance is arbitrarily defined to include values within  $\pm 1.5SD$  of the mean. Acceptable performance includes values within  $\pm 2SD$  of the mean. These limits are suitable for survey purposes only. Values outside  $\pm 2SD$  of the mean are not acceptable.
4. When the distribution of values fails to fall within a normal distribution curve (non-gaussian distribution), good performance is arbitrarily defined to include the range of values from 87 percent of participating laboratories and acceptable performance includes the range of value from 95 percent of



participants. A non-gaussian distribution occurs when the value approaches zero, as in bilirubin or creatinine values near the clinically normal range.

C. Folin-Wu Glucose Method

Glucose values derived by this method are consistently higher than results from laboratories using other methods. There is sufficient data in the medical literature which indicates that non-glucose reducing substances contribute to the higher values. In the 1969 Survey, the Folin-Wu method will not be listed in the questionnaire. Performance limits for laboratories using this method will be based on results from laboratories using the O-Toluidine method.

D. Calcium Values

Inspection of survey results shows a biphasic distribution curve which is reflected in an unduly wide Standard Deviation interval for calcium measurements. Values reported in milligrams per 100 ml. make up the major peak while a smaller one represents values reported as milliequivalents per liter. The Standards Committee recommends the use of limits based on milligrams per 100 ml. and has designed the survey questionnaire accordingly. Although explicit instructions should alert the laboratory to the proper unit, a small number of laboratories continue to report values in milliequivalents per liter.

One major problem in Calcium evaluation is the admixture of values in milliequivalents with those in milligrams. An arbitrary exclusion will be applied to all incoming results to sort out results in milliequivalents. Values which are less than 75 percent of the referee mean (for all methods) will be excluded. The statistical evaluation outlined for chemical measurements will apply to values remaining after exclusion.

II Immunohematology

Results from referees who are selected by the American Association of Blood Banks serve as guidelines for evaluation of participants. Referees must agree unanimously on the blood type, compatibility of crossmatch, and antibody detection and identification. Results will be classified as "Good" or "Not Acceptable." The category of "Acceptable" performance is not applicable. When disagreement exists, we will not evaluate participants' results.

III Serologic Tests

The 1969 Survey includes samples for detection of anti-streptolysin O (ASO) titer, infectious mononucleosis antibody, rheumatoid arthritis factor, serologic tests for syphilis and pregnancy tests. ASO titers from participants will be grouped by manufacturer of commercial reagents. The mode (maximum frequency of occurrence) and one dilution above and below the mode will be regarded as good performance. Other titers will be rated as not acceptable.

The Standards Committee is of the opinion that the

1969 Survey be limited to a study of qualitative results for infectious mononucleosis tests, rheumatoid arthritis factor, serologic tests for syphilis and pregnancy test. Results of these tests will be reported as negative, doubtful, weakly positive, or positive. Results for these tests will be grouped by method. Guidelines for evaluation will be derived from referee data. Decisions concerning partial disagreements (for example, a doubtful result when referees report a positive test) will be handled individually after consideration of the sensitivity of the test, the medical significance and in certain instances, the results of more elaborate testing by a reference laboratory. Results from participants will not be evaluated when at least 85 percent of referees fail to agree.

IV Bacteriology, Mycology, Parasitology

Good performance is defined as the identification of genus and species submitted by 80 percent. In selected instances, identification of genus only will be acceptable.

V Hematology

Participants' results will serve as a guide to setting limits for Hemoglobin measurements, white blood counts, red blood counts, and Hematocrit. The statistical approach will follow the plan outlined for chemical tests. The results of Prothrombin Time and Partial Thromboplastin Time submitted by participants will not be evaluated since there is insufficient information about factors which affect interlaboratory variation. Participants may evaluate their performance by comparison with referee laboratories. The results of blood smear examination will be based on referee reports.

VI Clinical Microscopy

Results from referees for qualitative and semi-quantitative urine chemical tests will provide guidelines for evaluation of participants. Decisions concerning equivocal results (e.g. weakly positive values or "borderline" results) will be handled individually after consideration of the sensitivity of the test, the medical significance and the results of fully quantitative analyses. As an illustration, the evaluation of semiquantitative urinary protein tests will take into account the results of quantitative analysis as well as the accepted sensitivity of the procedure.

The urine osmolality section is included in the 1969 Survey to gather additional information for future surveys and the results will not be evaluated.

Results of quantitative urinary protein testing will be evaluated by the system outlined for chemical tests. After exclusion of outliers, good performance will include values within  $\pm 1.5$  SD of the mean and acceptable performance,  $\pm 2.0$  SD of the mean.

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# Universal Health Insurance

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Administration\*, to the Annual Meeting  
of the Oklahoma State Medical  
Association, May 16, 1970.*

THE MOTTO of the actuarial profession is, in brief, "To substitute facts for impressions." In appearing before this convention on such an important and complex subject as national health insurance and Medicare, I would certainly want to stay with the facts of the matter and not to bring in impressions and emotions, as do so many persons when they get into these areas.

To start off with, I would disavow any claim to being a complete expert on all aspects of this subject. Rather, my experience has only been in the financing aspects. And most certainly, financing, although important, is by no means of primary importance, but rather the actual provision of medical care is paramount, and in that area you, my audience, have far more expertise. In fact, I believe that this is the great weakness of many of the advocates of national health insurance—namely, that they do not have a real knowledge of many of the complex elements that go into providing high-quality medical care, much as they might claim that they do.

Before going any further, let me define what I believe the term "national health insurance" means, since nowadays many people are using it with quite different meanings. In my opinion, national health insurance means a program under which the en-

tire population of the country, or virtually the entire population, would be provided all their medical care needs either directly by the Government through salaried physicians and other staff and through government-owned hospitals (socialized medicine), or else through private providers of service most of whose remuneration would come from government insurance programs (the Medicare or social insurance approach).

Other types of proposals are currently being made that are called national health insurance plans, but, in my opinion, they should be categorized differently. Some proposals would completely change—or it might be said, scrap—present methods of providing medical care. It would seem to many people that these would be catastrophic in effect if put into operation in the near future, and I think that many of the advocates realize this but are merely using the proposals for talking purposes. Other proposals would instead be harmonious with the present medical-care system, which, despite strident charges from some quarters, has not been remaining static but rather, in the desirable pattern of American democracy, has been gradually and steadily developing better and more efficient procedures as experience has indicated feasible.

The social insurance approach is taken in bills introduced by Senator Javits and Congresswoman Griffiths. Both bills are truly national health insurance, since they would apply to virtually the entire population and would provide virtually complete medical care, with the financing being through payroll taxes on workers and employers, plus a substantial matching government subsidy. The latter, of course, merely tends to hide some of the huge costs involved, since who else but workers and employers will provide

\*The views expressed here are those of the speaker and not necessarily those of the Social Security Administration.



the money for the general-revenues financing?

Within a few years, after the full range of comprehensive benefits are provided, the cost of these plans will be at least ten percent of payroll, regardless of how it is divided up, and could well be as high as 15 percent. Actually, no precise cost estimates are possible—as they can be made for a cash-benefits program—because there are so many intangibles involved. For instance, there could be no certainty in the cost estimating process as to how the remuneration of physicians will be determined once there is a monopolistic, monolithic health insurance program. Nor is there any way to know how much services will be provided in such areas as hospitalization and drugs once the financial restrictions on patients have been largely removed.

At the one extreme, a national health insurance system can have a low cost by fiat of the Government if it merely allots a certain amount of money for health services and provides only what results therefrom—which has been very much the case under the British National Health Service. On the other hand, the financial sky would be the limit if a national health insurance plan provides all the services that people demand as readily and quickly available as possibly can be, without regard to whether this is medically necessary or desirable.

A quite different approach has been taken by Governor Rockefeller. He advocates, in essence, that employers must have insurance or other programs covering certain basic health needs of their employees and their families, with a separate governmentally-financed program of similar nature for non-employed persons. In many ways, this would change the existing system very little, since the vast majority of employees in the country already have reasonably adequate private health insurance.

Another type of proposal is to grant tax credits for those who purchase, on a voluntary basis, comprehensive health insurance coverage from private insurers. The amount of the tax credit would be inversely related to family income, so that the very low income groups would receive their insurance

policies without cost to them. Then, there would be a gradual tapering off for higher incomes, until, after a certain point, there would be no government subsidy involved. Such proposals would, of course, be financed from general revenues and would therefore mean higher taxes from one source or another for the general taxpayer. Proposals along these lines have been made by the AMA and by Congressman Fulton and Senator Fannin.

A quite different approach has been suggested by Congressman Durward Hall. One part of his proposal would be to provide private health insurance policies for the medically indigent and thus would replace the Medicaid program. The second part of his proposal would cover truly catastrophic illness for the entire population, defining "catastrophic" in relation to the family's income. Through the latter procedure, families would obtain the very necessary economic protection in those rare instances where medical costs run far in excess of the maximum limits in most health insurance policies. The cost for this "catastrophic expense" plan would be met from general revenues, which seems a most desirable approach because of the relatively few cases involved—so that establishing any insurance system involving premium payments would be administratively inefficient.

One might well wonder why there is currently such a clamor for national health insurance or similar programs at this moment. Medical science has been making giant steps of progress, and the health and longevity of the American public is at an all-time high. Many different types of programs are being developed and put into effect to provide adequate health care for the very small minority of our population who are truly in poverty. And yet the advocates of socialized medicine are raising their voices even louder to denigrate the existing medical situation. In turn, this causes more moderate groups to examine the situation and to come up with alternative proposals of their own. Undoubtedly, this debate in our democratic society has certain advantages, but it does seem somewhat strange that it is now occurring.

I think that there is a rather simple explanation of this occurrence—namely, the



general inflation that we have been having for the last five years. As you well know, the price level has been rising at an annual rate of about five percent, while at the same time the general level of earnings has been rising about seven percent to eight percent per year. At the same time, physician fees have also been rising at about seven percent to eight percent per year, while hospital costs have been increasing about 15 percent annually. The much sharper rise in medical costs than in the general price level has been brought home strongly to the American public. For one thing, there is the natural tendency that people object most strongly to rising prices for things that do not give them immediate personal pleasure—and most medical costs hardly fall in that category, even though over the long run they are primary in achieving personal enjoyment and satisfaction of living.

The advocates of socialized medicine have seized this particular opportunity to achieve their goals or advance toward them, since they believe that the public can be aroused by the sizable increases in medical-care costs. These advocates made a strong drive for national health insurance—preferably of the socialized medicine type—in the 1940's, but they failed to achieve their goal because of the general growth of private health insurance then (which they said would never achieve the success it actually has).

After laying low for two decades, during which they sought to get the camel's nose in the tent through the enactment of Medicare, these advocates of socialized medicine are again out in the open in full force, using as their appealing argument the recent large increases in medical-care costs. As propagandists, they are quite willing to ignore and leave unmentioned several significant and crucial facts.

First, the largest increases in medical care costs have been for hospitalization—an area that is considered sacrosanct, because 95 percent of the short-stay hospital beds are in "non-profit" institutions. Second, the *relative* trend of physician fees in the past five years has been almost exactly the same as it was in the preceding two decades—namely, increasing at about the same rate as the general earnings level.

Third, the illusion is fostered that, some-

how or other, insurance is magic and has the inevitable effect of reducing costs. Actually, insurance does not reduce costs in the aggregate, but rather merely, although desirably, it spreads the costs among the insured group. Thus, none have extremely high costs, while others have little or no cost at all, but rather all persons have a uniform low or moderate cost (i.e. the premium rate).

In summary, on this point, it seems to me that the advocates of socialized medicine are trying to deceive the general public and sell them their old line of goods under a new guise—sharply rising medical costs which are unfairly blamed on physicians, when instead they are much more due to the rising general price and wage level and to the trend of hospital costs.

Now, let me turn to a subject on which I believe that I have considerably more expertise—namely, the financial status of the Medicare program, about which there has been much public misunderstanding. As you know, the Hospital Insurance program is financed predominantly by payroll taxes paid by and with respect to employed persons, whereas the Supplementary Medical Insurance program is financed by premiums from the enrollees and matching government payments.

The cost-estimating problems have been much greater for the HI program than for SMI. Under HI, the attempt is made to provide adequate financing over a 25-year period by establishing a proper schedule of contribution rates. On the other hand, under SMI, the premium rate is determined for only a short advance period, now annually.

The cost of the HI program over the next 25 years as now estimated is somewhat more than twice as high as the original estimate made in 1965, when the legislation was enacted. To say the least, this is a very professionally embarrassing situation. My actuarial colleagues in the private insurance sector in 1965 believed that my estimates were too low, but even their higher estimates are now only about half of what the cost apparently will be over the next 25 years.

What are the reasons that this very significant discrepancy occurred? The primary reason is the rapid and completely unexpect-



ed escalation of hospitalization costs that occurred in the past and that is quite likely to continue for at least a few more years in the future. Before 1965, hospitalization costs had been increasing about seven percent annually, and there seemed some indication that this rate would soon taper off. Instead, with the war in Viet Nam and the accompanying economic effects and, to some extent, with the introduction of the Medicare and Medicaid programs, hospitalization costs since 1965 have jumped by 15 percent annually. To the best of my knowledge, nobody in 1965 made any prediction that this could possibly happen.

The other factor—and a much less significant one—is the extent of hospital utilization. I had initially estimated utilization of about 3.2 days per person per year. And my insurance colleagues had estimated somewhat higher. But both of us were well below the current experience of about 4.0 days per person per year. My current cost estimates not only use this figure as a starting point, but they also allow for a small increase in hospital utilization each year for about the next decade.

Now turning to the SMI program, my actuarial cost estimates have been much closer to the mark. Once again, this is a point of evidence that contradicts the claim that physicians are largely, or even entirely, responsible for the costs of the Medicare program being much higher than anticipated! Specifically, the SMI premium rate is, by law, supposed to be determined so as to finance adequately the benefits and administrative expenses on an accrual basis. By the latter term is meant that the costs incurred in a certain period, even though payment therefor is made subsequently in some cases, is to be matched up against the income from premiums and government contributions for that period.

As the actual experience developed, the initial premium rate of \$3.00 was too low, but only by about seven percent. Although technically speaking, it might be said that this made the program financially insolvent, nonetheless it could continue to operate on a cash basis because of the inherent lag between the time when medical services are

rendered and when the program makes payments therefor.

The premium rate was then changed to \$4.00, in part because some new benefits were provided, in part to recognize that the initial rate had been too low, and in part to make allowance for likely future increases in physician fees and other costs covered by the program and in utilization of services by the enrollees. Once again, after the experience had developed and had been analyzed, it was found that the premium rate had been promulgated at too low a level—again by about seven percent. Part of this small discrepancy was due to an influenza epidemic and part was due to somewhat higher increases in fees than had been estimated. Still, the system was able to function on a cash basis for the reasons indicated previously, and there was a trust fund balance of several hundred million dollars.

Then, it became necessary in December 1968 to promulgate yet another premium rate, this time for the year beginning July 1969. Secretary Wilbur J. Cohen, who was to go out of office in a few weeks as a result of the election of President Nixon, had the legal authority to promulgate the premium rate at any amount which he determined, but the Congressional intent was that such rate should be based on actuarial analysis and computations. Nonetheless, Secretary Cohen ignored the actuarial recommendation of a rate of at least \$4.40 and instead continued it at \$4.00.

He took this action on the grounds that he would, in essence, freeze physician fees (but not other costs under the program) at the existing level—even though he would not be around to see that this was done! Moreover, he had the temerity to say that he was taking this action to help President Nixon, since this would mean less cost to the General Treasury for the matching contributions! Of course, what he did not say was that his action would virtually bankrupt the SMI Trust Fund—as it has actually done—and would therefore cause his successor greater embarrassment by forcing him to promulgate a much higher premium rate the next time.

And all this has actually occurred. The balance in the SMI Trust Fund at the end of next month will probably be only about



\$50 million, or the equivalent of only about one week's outgo. Secretary Finch found it necessary last December to promulgate the new premium rate, beginning in July, at \$5.30 per month, and he forthrightly followed the actuarial recommendation despite the widespread political criticism it evoked.

Now let me turn briefly to the matter of the freezing of physician fees in the past. Let us also consider current proposals for the future, as the Nixon Administration has recommended and as the House Ways and Means Committee has adopted in a bill that it has recently reported out.

I do not claim to have the answer as to whether physician remuneration is too high or too low, but I am convinced that the recent *trend* in physician fees is entirely justifiable in relation to other prices and to salary levels in general. The justifications made by former Secretary Cohen for freezing physician fees for Medicare purposes do not seem to me to be in accordance with the intent of the law.

When Medicare was enacted, the principle was that reimbursement would be made on a reasonable-charges basis, as determined by the physician's customary charges to all his patients and by the prevailing level of physician charges in the locality. With respect to the latter element, I believe that there was the misconception that, in a given area, the vast majority of the physicians had about the same general charge structure and that only a few "society" physicians had much higher fees. Assuming this to be the case—and I believe that, in actual practice, it is really not so—then the intent of considering prevailing charges was to reduce only the few instances of much-higher-than-average charges. In fact, the underlying intent of the legislation in this respect was that the SMI program should consider physician charges in the same manner as was, and still is done by the large group insurance companies, who take a very flexible view of the situation and only reduce charges for reimbursement purposes when there are obviously excessive charges or fraudulent ones.

Instead, the administrative operation of the SMI program was established on a quite different basis, with painstaking and costly procedures devised so as to examine closely all charges. In my opinion, this advance

planning was done solely for the eventual control of physician fees on a very stringent and different basis than was originally envisioned in the law. Some of this rigid control has already come to light, and some people would like to have much more of it in the future. And the apparatus has been constructed to do exactly this! Underlying all of this is a belief on the part of many of my colleagues that physicians now (and in the past as well) have exorbitantly large incomes and that their incomes should be reduced—or at least held down in the future as prices and other salaries rise. Some of these colleagues are civil-service employees, but incredibly, a few are political appointees of the Johnson Administration who have not been replaced by the Nixon Administration, despite their strong philosophical views favoring the former.

Some very stringent procedures, as well as the supporting "logic," were developed to justify the freeze of physician fees that former Secretary Cohen imposed and that Secretary Finch has been virtually compelled to continue. Actually, I am not certain that this freeze had any real effect. Like many other economic controls, it may have pushed in the inflationary balloon at one point, only to have it push out in a counteracting manner in another place (such as more utilization or such as charging for some items previously furnished without charge).

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*Mr. Myers is the author of two books, "Social Insurance and Allied Government" and "Medicare."*



One might reasonably think that the term "customary charge" means what the physician is currently charging his patients, just as though he had a sign listing his fees posted in his office. Instead, the peculiar interpretation has been evolved which says, in essence, that a fee is not customary until it has been in effect for about six months, and then "custom" cannot change for another year. No such illogical limits prevail in other economic areas—as, for example, utilities being granted an increase in their rates on a certain date because they are economically justified, but then not being allowed to put them into effect for 18 months because of a "customary" provision. In the same way, such artificiality has been introduced in the "prevailing charges" concept, so that there too an 18-month lag is present.

A proposal has currently been made by Secretary Finch that, in the future, the prevailing-charge limits on whatever are determined to be the customary charges of a particular physician shall be the present allowable prevailing charges increased by an index made up partially of changes in the general level of physician fees and partially of the changes in the general cost level of living. Since the latter usually rises at a lower rate than the former, this would mean that, over the course of time, the prevailing-charges limit would gradually apply completely to each physician, rather than his customary charges. So, there would eventually be a flat fee schedule under SMI for all physicians in a particular locality, determined by the Government. This is quite different from the original approach in the Medicare legislation of paying reasonable charges of physicians!

The physicians of this country have been neatly trapped by the social planners, who secretly envy their high incomes, whether real or only apparent, and thus criticize them on any possible grounds. The intent of the Medicare program was that persons aged 65 and over should pay the same physician fees as younger persons, and thus should not be second-class citizens by being given lower, "charity" rates. Now that the physicians have charged in this manner, they are severely criticized! If they had artificially

held down their fees for Medicare patients, then they would have been subject to the danger that the social planners would have pointed out that Medicare was operating very well and at a low cost and that therefore it should be extended to the entire population. You can't win!

The only possible solution to this apparent dilemma would be the development of a feeling of mutual trust and confidence between the Government and the medical profession. This certainly does not exist now—and for good cause. It was quite understandable why this situation did not prevail under the Johnson Administration. It seems almost inexplicable that there has been no change in the current Administration. Perhaps the reason for this is the fact that a number of high-ranking political appointees of the Johnson Administration in the Social Security Administration and in the Public Health Service who develop policy, even though perhaps not finalizing it, have not yet been replaced.

I cannot conclude without saying a few words about the cash-benefits program, Old-Age, Survivors, and Disability Insurance. I deeply believe that this is a very necessary and desirable program and that it is now, and has always been, soundly financed. I believe, as you may know from some of my writings, that there are grave potential dangers ahead because the political liberals, or expansionists, when they get in office again will make strenuous efforts to change the program so that it will no longer be a floor of protection.

Instead, these proponents wish to see the Government provide virtually complete financial security to non-working members of our society through governmental means. In the process, they would destroy almost completely all individual efforts through private savings, private insurance, and private pension plans. I believe that this would have catastrophic effects on people as individuals and, further, that it would have the side effect of greatly weakening or destroying our private enterprise system because of drying up much private investment capital.

The thing to beware of is the introduction of government subsidies into our social insurance systems that are now supported



entirely by payroll taxes. Such subsidies give the appearance of being a painless way to expand greatly the benefits of the program, since nobody *appears* to have his

pocketbook tapped therefor, whereas increases in payroll taxes are easily discernible and, accordingly, subject to taxpayer resistance. □

## MYERS RESIGNS AS SSA ACTUARY

*The author of the preceding article submitted his letter of resignation on April 15th and it was accepted on May 25th. Following is the resignation letter:*

Honorable Robert H. Finch  
Secretary  
Department of Health,  
Education, and Welfare  
Washington, D. C. 20201

Dear Mr. Secretary:

It is with the utmost regret that I am constrained to submit my resignation as Chief Actuary of the Social Security Administration.

I am deeply concerned about the welfare of the Nation, and I wish to serve the Nixon Administration and the Congress to the best of my ability. I believe that I can best serve these causes by remaining in my present position until the president signs the Social Security bill which will result from the pending Congressional deliberations. Therefore, I have not set a definite date for my resignation. If you believe that my continued presence is not in the best interests of the Department, I will be glad to make my resignation effective at any earlier date. I would appreciate your informing me as to your views on this matter.

I wish to make it clear that my resignation is by no means related to my views on the pending Social Security legislation. In fact, the situation is quite the opposite. I strongly believe that the President's proposal is an excellent one, including its sound financing. It is certainly the most progressive, forward step taken in the Social Security field in many years.

I believe that the President's proposal very well conforms with, and implements, the moderate philosophy of Social Security. It is a progressive, forward step that would prevent future over-expansion of the program, which would destroy private efforts in the economic security field and thus lead to serious consequences insofar as our national economy is concerned.

I should also add that now—as at all previous times during my 35 years of actuarial service with the Social Security program—no one has made any attempt whatsoever to influence or sway the technical actuarial cost estimates for the existing program or any proposed changes therein.

The question might well be raised as to why I believe, in all conscience and integrity, that I must resign. I have previously talked with you about my strong personal beliefs and have given you much supporting factual evidence to substantiate my views—namely, that certain of the top-policy-making officials of the Social Security Administration (who are holdovers from the Johnson Administration) have strong

beliefs in the desirability—even the necessity—of the public sector taking over virtually all economic security provisions for the entire population and thus eliminating private efforts in this area. It seems to me that this viewpoint is completely alien to that of the Nixon Administration.

Further, and equally important, it is my deeply-held conviction, as I have expressed to you a number of times in the past, that these officials of the Social Security Administration have not—and will not—faithfully and vigorously serve the Nixon Administration. Rather, they will exert their efforts to expand the Social Security program as much as possible by aiding and supporting any individuals and organizations that are of this expansionist conviction. Such anachronistic actions took place extensively during the Eisenhower Administration—against its political views. Such working at cross purposes with the Nixon Administration has occurred in the past year, and is still occurring, although to a somewhat limited extent so far. I have brought to your attention, on several occasions, the fact that the Social Security Administration is excessively wasteful by spending far too much time and money in performing research, conducting program planning, and collecting statistics in a manner that is not only nonproductive of sufficient worthwhile results, but also inimical to what I understand to be the philosophy and goals of the Nixon Administration.

Undoubtedly, there will be those who will say that I am taking this action solely or largely because I seek enhanced personal recognition. This is not the case. There is no position of any type that I would rather serve in than my present one, and I am not happy to have to leave it.

Evidently, no credence is placed in what I have related to you personally or in other evidence that I have furnished you on this matter, which has such an important effect on the future of the Social Security program. Therefore, I must, in good conscience and personal integrity, resign. It is especially dismaying to me to have to take this action, because I had hoped to serve the Nixon Administration not only with competence and integrity—as I had tried to serve all previous Administrations—but also with great enthusiasm, since I strongly believe in its philosophy and goals.

Sincerely yours,  
ROBERT J. MYERS, F.S.A.  
Chief Actuary

cc: The Under Secretary



# Books As Clinical Tools

## CLINICAL REFERENCES IN ONCOLOGY

JOE M. PARKER,\* M.D., F.A.C.S.

Cancer is a multiplicity of diseases and involves numerous disciplines of medical therapy. There is no one textbook or treatise which could cover all the facets of the present knowledge. It is for this reason that the cancer therapist must rely largely on medical journals in his particular specialty to keep abreast of current trends and innovations. The Regional Medical Program, recognizing the large amount of progress being made, has as one of its main goals speeding to the bedside of the cancer patients the latest knowledge gained by all types of research. Superior care of cancer patients requires the combined acumen of many specialties. The purpose of this essay is to review some of the information sources to which the practitioner may turn to supplement his knowledge in this field.

Ackerman and Del Regato's *Cancer*<sup>1</sup> is an excellent summary of the gross and microscopic pathologic findings which form the basis of diagnosis. This book also covers the radiologic therapy of malignancies. Pathologists and radiologists are in agreement that this book provides good fundamental information relevant to most clinical specialties. Many pathologists also find the *Armed Forces Fascicles*<sup>2</sup> very important in properly categorizing tumors. Radiologists, in addition to Ackerman's book, stress the value of Moss' *Textbook of Radiotherapy*.<sup>3</sup> The older textbook of Murphy<sup>4</sup> is also a very valuable reference. The many journals of radiotherapy contain the latest information which is changing so rapidly that any textbook is to some degree obsolete before it is printed.

The general surgeon finds no one textbook that covers all of the procedures that he would be called upon to do. *Cancer Management*<sup>5</sup> is valuable, as are many books in

the individual specialties. The latest procedures are usually found in *Surgery, Gynecology, and Obstetrics* and in *Annals of Surgery*. The gynecologist has frequent use of *Novak's Textbook*<sup>6</sup> for reference in regard to pathology and treatment.

Chemotherapy has resulted in some palliation of cancer, but cures have been few. Notable exceptions to this would be treatment of Wilm's tumor, choriocarcinoma, and Burkitt's lymphoma. There is no textbook at present that is all inclusive for the clinician. Brodsky's *Textbook of Chemotherapy*<sup>7</sup> is probably as helpful as any. The difficulty, of course, is again the rapid obsolescence of books in this field.

Because of the rapid innovations in cancer therapy, clinicians must avail themselves of the many journals which have to do with the treatment of cancer. One of the most outstanding of these is *Cancer*. This journal is largely devoted to research and academic problems, but with a fair amount of clinical information which frequently is of great significance.

The 1970's are envisioned by many as the age of immunotherapy. There is no textbook that covers this field also, but a recent article by Hellström<sup>8</sup> has pointed out many of the difficulties and possibilities which may be exploited shortly. At this time it would seem that the treatment of cancer is moving towards conventional removal of the bulky tumor first; then immunotherapy, or chemotherapy, or both are directed at the sites of spread, if any, so that there may be complete control of the disease. □

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\*Consultant on Cancer Activities, Oklahoma Regional Medical Program and Clinical Professor of Surgery, Oklahoma University School of Medicine.

One of a series sponsored by the Department of Continuing Education, University of Oklahoma School of Medicine.



## Business Highlights of the 1970 Annual Meeting

The OSMA House of Delegates met in its regular annual meeting on Thursday evening, May 14th, and Saturday morning, May 16th, to consider the past year's activities of the association and to lay plans for the coming year. Election of new officers and reports from various association committees and councils were given prime consideration.

During the House meeting on Saturday morning, Ed Calhoon, M.D., Beaver, was recognized as President of the Association for 1970-71, and was installed that evening at the inaugural banquet. He replaces Hillard E. Denyer, M.D., Bartlesville. Doctor Calhoon was chosen President-Elect of the association during the May, 1969 meeting in Tulsa.

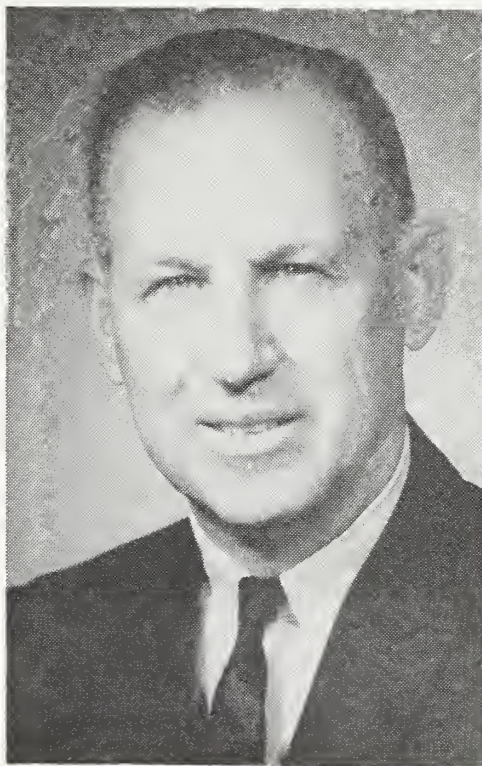
Lucien M. Pascucci, M.D., Tulsa, was chosen President-Elect of the OSMA and will serve one year in that position before assuming the President's office at the next annual meeting in 1971.

Marvin K. Margo, M.D., Oklahoma City, was elected to serve a one-year term as Vice-President of the association. Stanley R. McCampbell, M.D., Oklahoma City, was re-elected to a two-year term as Secretary-Treasurer.

House of Delegates officers elected this year include Speaker of the House and Vice-Speaker. Roger Reid, M.D., Ardmore, was elected to a two-year term as Speaker. Doctor Reid had served previously as Vice-Speaker of the House, but assumed the Speakership upon the death of Doctor C. M. Hodgson of Kingfisher. Elected to serve a two-year term as Vice-Speaker of the House was S. N. Stone, M.D., of Oklahoma City.

Two AMA Delegate and Alternate Delegate positions were up for re-election this year. Scott Hendren, M.D., Oklahoma City, and Harlan Thomas, M.D., Tulsa, were elected to two-year terms as Delegates to the AMA. Alternate Delegate positions were filled by Rex Kenyon, M.D., Oklahoma City, and Orange Welborn, M.D., Ada.

The OSMA Board of Trustees held



Lucien M. Pascucci, M.D., Tulsa radiologist, was named President-Elect of the OSMA during the annual meeting. After serving one year in this capacity, he will assume the leadership of the association in May, 1971.

its annual meeting on Thursday morning, May 14th, to consider recommendations to the House of Delegates and elect a Chairman of the Board. C. Riley Strong, M.D., El Reno, was re-elected as Chairman of the Board for a period of one year, and Orange M. Welborn, M.D., Ada, was elected for a one-year term as Vice-Chairman of the Board.

During the three-day meeting, the House of Delegates considered fourteen committee and council reports, twenty resolutions, and reports from the President, Secretary-Treasurer, and Board of Trustees.

The complete proceedings of the House of Delegates will be printed in the July issue of *The Journal*. The following is a summary of the principal actions:

- Delegates received a report from the Committee on Planning that \$25,551 had been received in contributions for the OSMA building expansion project. These contributions enabled the association to carry out the building project and still retain a surplus for future contingencies.

- The Committee on Planning also recommended a program to assist rural physicians in continuing their postgraduate education. The report pointed out that over 50 Oklahoma communities now are served by only one medical doctor and these men find it difficult, if not impossible, to attend educational refresher courses. It was proposed that the Board of Trustees establish a program whereby physicians from metropolitan cities can volunteer to relieve their rural colleagues for periods of two to three weeks in order that they might take educational sabbaticals. The report envisioned that the postgraduate education department of the O. U. Medical Center would "tailor make" courses to meet the needs of individual practitioners so relieved of their practice responsibilities. The House of Delegates authorized the Board of Trustees to take action necessary to implement this plan.

- In the report of the Committee on Financial Aid to Education it was stated that since 1962 the association had paid \$5 for each dues paying member into a loan and scholarship fund managed by the O. U. Medical School. During that time approximately \$73,000 has been transferred to the account. Of this amount \$24,750.00 has been given out in scholarships to students on the basis of academic achievement. The balance has been loaned to medical students on the basis of financial need, in low interest loans to be repaid three years after completion of training. The report pointed out that the association has now created a Council on Rural Medicine and the council is studying the possibility of creating a "rural medical scholarship program." The committee requested and received House of Delegates authorization to change the nature of the present program to encourage medical students to practice in rural areas. Students signing



a contract for rural practice will be forgiven from repayment of their loans if the terms of the contract are fulfilled.

- The Council on Insurance reported to the House of Delegates that it was currently studying a proposal from the Insurance Company of North America to increase the amount of monthly indemnity available under the OSMA Disability Income Insurance Program. The increase would be upped to \$1,200 per month. The current program has over 800 members insured and allows an individual physician to select from a number of waiting periods and a variety of monthly benefits ranging up to \$800 per month. Beginning June 1st, INA has agreed to reopen enrollment in this program to physicians under age 40 for a period of 90 days regardless of their insurability. However, if they are uninsurable, they will be restricted to \$200 a month coverage and a 30-day waiting period before benefits would begin.

- OSMA's Overhead Expense Program, underwritten by the Continental Casualty Insurance Company, showed such a favorable experience over the years that 20 percent rate reduction was achieved in 1969 and, in addition, available monthly coverage was increased from \$1,000 to \$1,500. Premiums for this insurance program are deductible as a business expense.

- Despite recent rate increase, Oklahoma continues to have one of the nation's finest professional liability programs. It is underwritten by the Pacific Employers Indemnity Company, a subsidiary of Insurance Company of North America. Even though there was a rate increase during 1969-70, the new OSMA rates are still 10 percent below the rates recommended for Oklahoma by the National Bureau of Casualty Underwriters. Since the time the rates were increased, the bureau has increased basic rates in Oklahoma by 50 percent, which places the OSMA program in an even more competitive position.

- A report on chiropractic in the state was included in the Council on Professional and Intervocational Relations report to the House. The report was based on a survey conducted by the Cults and Quackery Committee of the association regarding the location of chiropractors in the state. Forty-two county societies replied to the survey and reported the location of 214 cultists practitioners. If this number is correct, it would prove the falseness of the chiropractors' statement that they are the second largest group of "health practitioners" in the state.

- A three-day medical-legal institute will be held at Fountainhead State Lodge July 23-25, according to the report of the Medical-Legal Relations Committee. Purpose of the institute is to promote a closer personal relationship between members of the medical and legal professions. It will also serve as a study in malpractice prevention for physicians and will aid attorneys in advising their physician clients. The institute will be a joint venture, but neither the bar or medical association will be required to underwrite its cost. The cost will be offset by a \$35 per person registration fee.

- Activity of the Oklahoma Osteopathic Association was reported by the Committee on Osteopathy. The report pointed out that the osteopaths had initiated a formal meeting between the two associations. The report recommended to the House that a committee be appointed to establish formal liaison with the osteopathic association. It specified that the committee should be free to enter into open discussion on any and all problems or areas of concern of either association. It further specified that such liaison be established only if the osteopaths were willing to give their counterpart committee the same latitude of discussion. The report stated, "any decision on possible policy changes will, of course, be taken to the OSMA Board of Trustees and House of Delegates."

- In the report of the Council on

Public Health, the Committee on Immunization stated that "Rubella Sunday" was successful and that on February 1, 1970, 207,251 Oklahoma children between the ages of one and eleven received rubella vaccine. That number, combined with the 50,000 that had been previously inoculated by the State Health Department, gave Oklahoma a 52 percent immunization level, the highest in the nation.

- The Immunization Committee report also stated that in addition to the rubella campaign, the committee supported passage of legislation that would require children entering school for the first time to show evidence of basic immunizations or immunity tests. This legislation has been signed into law by Governor Bartlett.

- The Council on Public Health's Committee on Maternal Mortality report stated that a recent survey of 156 of the state's 160 hospitals revealed that 38 licensed facilities do not have a whole blood supply readily available. Maternal mortality reports in Oklahoma indicate that a number of maternal deaths could be prevented if an adequate supply of whole blood was available. The relative short shelf life and proper supply seems to be the major problem and it was the committee's recommendation that the OSMA continue its efforts to establish adequate blood supplies in Oklahoma hospitals.

- The Council on Public Policy reported on a number of amendments that had been offered to the Social Security Act which would affect medical services. One proposal would reduce payment to physicians to the 75 percentile level from the present 83 percentile level, and would freeze physician fees at the present level for the following year. Subsequent allowable increases in physician's fees would be based upon a special cost of living index, minus that portion which is directly attributable to health care costs. The proposal would further require that the Secretary of HEW compile a list of all physicians who derive \$10,000 or more annually from any of the programs or combination thereof and,



further, that this list would be reported to the Congress.

- Regarding national health insurance, the report of the Council on Public Policy stated that the AMA's "Medicredit" proposal seeks to counteract some of the more liberal proposals for nationalized health care by providing for income tax credits for the purchase of private health insurance. The amount of credit would be based on the individual's tax liability on a percentage ratio. Indigents would receive vouchers from the federal government for purchase of private health insurance.

- The House of Delegates approved the text of a proposed "buyers guide" for health insurance submitted by the Council on Socio-Economic Activities. The buyers guide will assist Oklahomans in the selection of high quality prepaid protection against the cost of illness. The association will join with Oklahoma Blue Shield and the Oklahoma Hospital Association in printing and distributing the buyers guide.

- One portion of the Council on Socio-Economic Activities report dealt with current trends in the Medicare and Medicaid laws. The report stated, "prior to the implementation on the Medicare law, the House of Delegates took the position that payment for health services by the government should be at the fair market value, and that physicians should not be expected to underwrite a tax supported program through personal charity." The report went on to recommend that the association remain alert for any attempts at unreasonable price controls, and that the House of Delegates be convened immediately in the event such occurs.

- Tulsa county society introduced a resolution calling for a change in the bylaws to allow residents membership in the association on a dues exempt basis. This resolution was acknowledged by the Constitution and Bylaws Committee report and it was the committee's recommendation that the resolution be adopted and the bylaws amended. The House of Delegates concurred and the proper amendments were placed in the bylaws where needed.

- For the first time the House of Delegates received the report of the Council on Rural Medicine. The OSMA authorized the creation of a special OSMA Council to study the problems of medical care in rural Oklahoma. The report of this council noted, "for several years, the medical manpower shortage in certain areas of Oklahoma has caused concern in the medical community and general public. Physicians, like other professionals are not inclined to practice in the remote and needy areas of the state. The goals of the new council are to (1) determine the health manpower needs of Oklahoma, (2) draft conclusions on how these needs can best be met, and (3) make recommendations to various agencies, associations and governmental bodies on how best to solve the problems, "keeping in mind that health problems are usually best solved by physicians or by persons, health aids or organizations that are acting under the full supervision of physicians." One of the first functions of the council was to request a rechanneling of the association's money used for scholarships and loans to medical students.

- Among resolutions adopted by the House of Delegates was one calling for the adoption of the new AMA publication Current Procedural Terminology, Second Edition. The resolution urged all members of the association to convert their coding procedures to this new official system as rapidly as feasible. (Copies of this book are available from the AMA at \$2.00 each.)

- Two resolutions were approved for introduction at the AMA level. First, the AMA is encouraged to establish a mechanism for recognizing postgraduate education credits of the American Academy of General Practice in connection with the AMA postgraduate educational award. Secondly, the OSMA delegates approved a resolution which was generally critical of the report of the AMA Committee on Planning and Development (a lengthy document containing 57 recommendations to guide future AMA activities and philosophy).

- Delegates received and accepted a report from the Board of Trustees which, in effect, rescinded the present form of a "provider's agreement" issued to physicians as a condition of participating in the Medicaid program. With the cooperation of the state welfare director and John Venneman, Under Secretary of the Department of HEW, an alternate approach was taken in order to comply with the law. In lieu of a bilateral application to participate, it was decided to simply imprint the precise language of the law on the claim form (the law relates to the maintenance of adequate records in documentation of services to Medicaid beneficiaries).

- Several resolutions against Blue Shield's program to pay physicians on the basis of "usual, customary and reasonable" fees (a program approved by the House of Delegates in 1968) were considered and abandoned in favor of authorizing the Board of Trustees to negotiate an arrangement with Blue Shield to clearly make it possible for a physician to decline the UCR concept on a case-by-case basis.

- The Oklahoma Regional Medical Program was commended by resolution with a proviso against national legislative efforts to amalgamate the program with Comprehensive Health Planning.

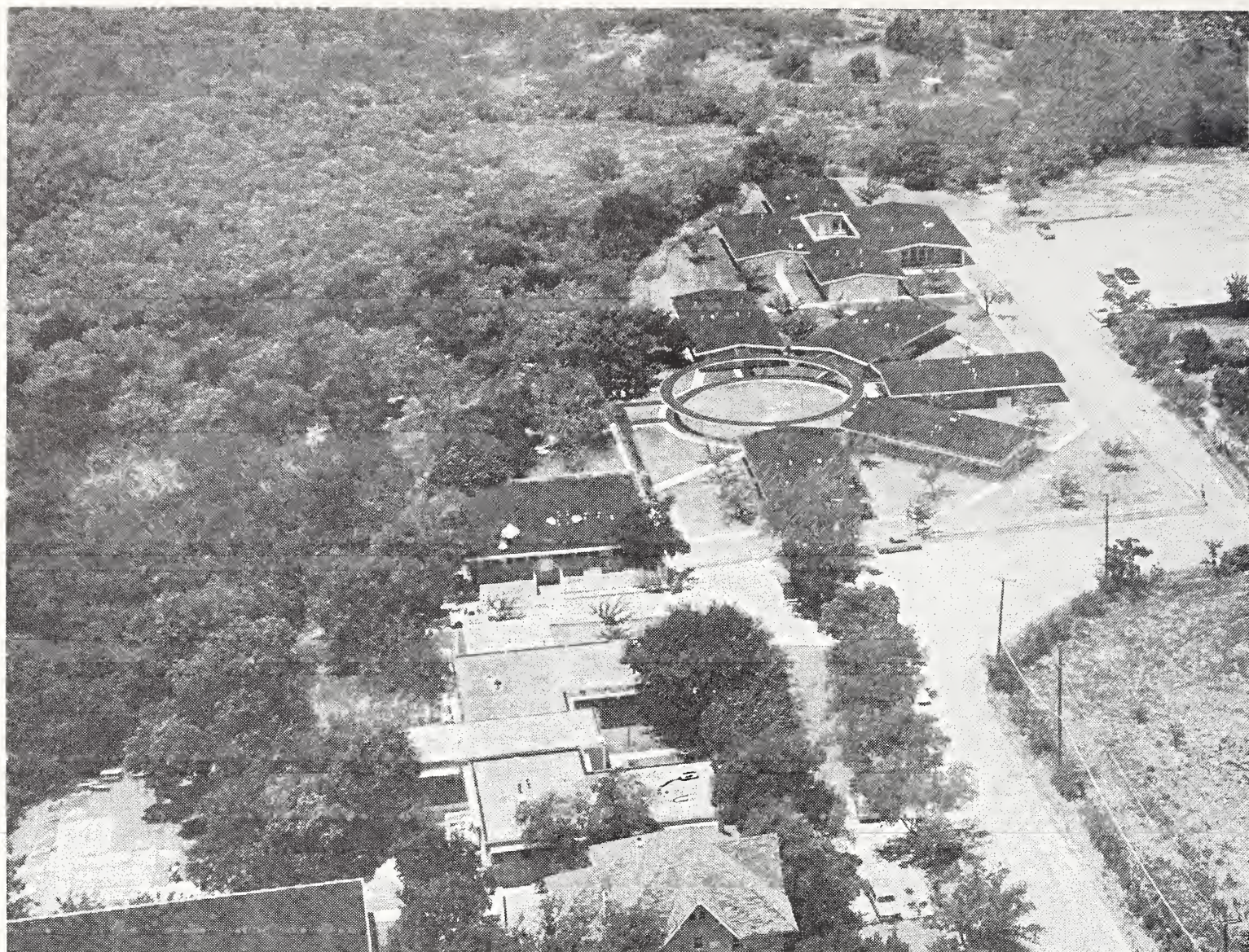
- Action was taken against the warning leaflet being inserted by FDA in oral contraceptive packages. □

## Resolutions Received By The Journal

Tributes acknowledging the loss by the medical profession and the faculty of the University of Oklahoma School of Medicine by the deaths of three of its members have been received by *The Journal* from the Committee on Resolutions of the OU Medical Center.

Copies of the resolutions honoring LeRoy D. Long, M.D., Basil A. Hayes, M.D., and J. Walker Morledge, M.D., all of the OU Faculty, have been sent to their relatives with sympathy and a desire to share their mutual loss. □





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## President Calhoun's Inaugural Address

As I stand here tonight, I can say my roots are deep in the soil of Oklahoma and am proud to be an "Okie." I remain forever grateful to this State that has educated me, and shall continue to help repay for this education by using what God given talent and skill I have to aid its people medically; which was, after all, the purpose for which this State helped educate me.

If I bring expertise to this office, and I am not so presumptuous to think it would be much, it would be my experience professionally and personally with the people of Oklahoma. Four facets of their personality continue to inspire me: their optimism, energy, enthusiasm and pride.

For the past fifteen years I have been closely associated with a certain minority political party and fortunately have seen this State become a two-political party state. These associations have made me no stranger to this group of State leaders and I believe I know their thinking and views.

As a member of a Board of Regents for Higher Education for many years I am certainly acquainted with the intellectual community of Oklahoma.

Born and reared on a farm and ranch, being educated in Oklahoma, working my way through college and medical school has uniquely fitted me to practice as a generalist and surgeon to its rural people for the past twenty years.

These previously mentioned associations and my dialogue with them reveal one need and desire in common by all: Available, capable and sympathetic medical care.

True, at times the average layman would like his physician to have a Ph.D. before entering medical school, get his boards in the specialty of his choice, return to the old hometown, marry the preacher's daughter and charge \$3.00 for an office call.

We hear much these days of the basic right and privilege of people to obtain medical care. I am not

here to argue this point; nevertheless, how is today's physician to respond to today's needs?

We now hear from all segments of society a clamor and chorus of people doing their own thing. The question I now raise concerns government allowing us to do our own thing. Namely, to practice free of restrictions, intervention or coalition. Certain socialistic segments of our society say that private practice and free enterprise in medical systems cannot remain and still the patient be served. *This I do not agree with.*

Granted, much needs to be done in the private sector to insure better health care but before government votes national compulsory health insurance, I ask them to examine ailing national health insurance in Great Britain and Canada as well as the almost unsurmountable problems in our Title 18 and 19 plans.

Ancient Jews held a symbolic rite in which the sins of its people were ritualistically placed on a goat's head. The poor animal was then allowed to escape and thus remove their guilt from them—a scapegoat, if you will. I contend government is trying to make physicians its scapegoat in perpetuating the theory that health is a basic right and privilege. Every time a bureaucrat's formula fails we get his sins on our heads. As a physician in a small town where it is near impossible to escape a private practice but to leave town, having stayed up caring for patients and spending many nights with little rest and sleep, having travelled as far as 55 miles on a house call, I feel I am aware of the responsibilities and trying circumstances connected with the care of the private patient. I must also admit to being aware of the patient's plight, as this is a two-way street: crowded waiting rooms, broken appointments, mechanical, indifferent and non-compassionate treatment, but for the most part the people accept us for being the human mortals we are. They hesitate to call for fear of disturbing us. This then becomes the give and take of private

practice. Can government by intervening better this system? Does it have some intellectual alchemy denied we professional mortals? I doubt it.

As Voltaire once said "Optimism is the madness of maintaining that everything is right when it is sometimes wrong." Many things are wrong in our present health care system. From all sides we hear the question—why can't we get enough physicians to care for us? (I invite your remembrance to three nights of CBS recently.) Again, could government overcome this physician shortage by subsidizing medical schools and shortening curricula? Again I doubt it. As Anthony once remarked to Brutus "Nothing becomes him more in his job as in the learning of it." I question if the medical learning process could be shortened much and still maintain present standards.

There seems to be a dearth of physicians in the general practice of medicine. Why? I lay this to the people themselves. The present patient is very sophisticated in medical desire; aware of specialization in medicine and its results, they have therefore migrated to this type of practitioner. Students sense this and respond accordingly by entering specialty training. Generalists in practice not caring to do only the menial tasks of medical practice leave these areas and resume specialty training. I have long responded to a favorite layman's question "where is the old fashioned doctor" with the quip "you find me an old fashioned family and I will produce the old fashioned doctor."

As to answering the questions I have raised this evening, I can only say we are working on them. By our inattention to them we are turning them over to other groups for answer. Our state medical association maintains close liaison with our medical school, legislature and the public and we are trying to solve these problems. If we wish to have a part in making these vital decisions of the next five years we had better get on with considering what problems are to be solved and what al-



ternatives present themselves. Failing this we have only ourselves to blame. "The fault, dear Brutus lies not in our stars, but in ourselves, we underlings." I can assure you that in the coming year and with your help I shall try to prevent further government encroachment and explore various private avenues for solution.

In closing, I have no magic tea leaves to read for telling the future. Some of you are perhaps more perceptive than I in equating the past and the present with the future. It is safe, one surmises, to say that further federal intervention into health care fields will be the order of the day.

In the meantime we must continue to care for the patient as we have in the past. Let's work a bit harder, be more compassionate, and be more accessible to our patients. By doing this we will best circumvent outside action.

I am tonight asking each of you to follow a bit of advice given by Sir William Osler "We are here to add what we can to—not to get what we can from *Life*." Thank you. □

## Physicians Pass Family Practice Specialty Exam

The first certifying examination in the new medical specialty of family practice has been successfully passed by 81.6 percent of the 2,078 physicians taking the test.

According to John G. Walsh, M.D., president of the American Board of Family Practice, the examination was offered in 36 centers throughout the country on February 28th and March 1st, 1970.

Doctor Walsh said plans are now being formulated to stage a second examination in February, 1971, and noted that candidates who pass it will be included in the charter membership of the Board of Family Practice. Additional information on the 1971 examination may be obtained from Nicholas J. Pisacano, M.D., University of Kentucky Medical Center, Lexington, Kentucky. □

## Annual Meeting Social and Scientific Programs Success



Pictured are early arrivals at the Saturday evening social hour held at the poolside of the Skirvin Hotel's Sun Suite.

According to the annual meeting committee the 1970 annual meeting of the state medical association was a success both socially and scientifically.

Paul D. Erwin, M.D., Annual Meeting Committee Chairman, stated that even though the registration was down slightly from 1969, attendance at the social and scientific functions was the highest ever. The two main entertainment functions, the Friday night "Attitude Adjustment Party" and the Saturday night dinner-dance, attracted over 300 physicians and wives each.

Nearly 400 persons attended each of the two free picnic luncheons at noon on Friday and Saturday.

William L. Parry, M.D., chairman of the scientific portion of the annual meeting, stated that the special system sessions drew exceptionally large crowds of physicians and that all scientific section meetings were extremely well attended.

The three special general sections Saturday afternoon on Sex Education, Universal Health Insurance, and Malpractice Prevention, all drew large audiences. The audience

for the Sex Education presentation by James L. Mathis, M.D., Rutgers University, drew a standing-room-only crowd.

Ed L. Calhoon, M.D., was installed as President of the OSMA during the annual dinner-dance on Saturday evening. His installation was followed by a short presentation from Colonel Tom Stafford, one of Oklahoma's astronauts, who discussed medical aspects of space flight.

During the dinner-dance, trophies for the OSMA golf tournament were presented. Lawrence Silvey, M.D., took the trophy for the low gross score, while Leon Combs, M.D., took the low net trophy. Orville Rickey, M.D., came in second twice with both a low gross score of 73 and a low net score of 70.

In tennis competition, Doctor Farris Coggins was the singles winner. Doctor Lee Ison and Doctor Tom Parker were victorious in doubles.

Nearly 60 scientific and commercial-pharmaceutical displays were set up in the exhibit hall during the meeting and were staffed by nearly 300 exhibit personnel during the three days. □



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## Points Receives HEW Appointment

HEW Assistant Secretary for Health, Doctor Roger Egeberg has named Doctor Thomas C. Points, Oklahoma City, as deputy for medical services. According to a McGraw-Hill publication, *Washington Report on Medicine and Health*, "Points helped the University of Oklahoma Medical Center set up a rural health project called 'Project Responsibility.' His appointment has the full backing of the AMA. Points, understood to be one of AMA's unsuccessful candidates for Egeberg's job during the Knowles controversy, now will be in good position to take the job should Egeberg leave—an increasingly popular rumor in the department mill."

Points, a 1941 graduate of the O.U. School of Medicine, has served in numerous positions with the county, state and American Medical Association. He is an alternate delegate to the AMA House of Delegates from Oklahoma and is a member of the AMA's Committee on Health Manpower. □

## Bird Named Dean of OU Medical School

Robert M. Bird, M.D., associate dean of planning and development at the University of Oklahoma School of Medicine, has been elevated to the post of dean of the School of Medicine, effective July 1st.

Bird's promotion was one of two key Medical Center appointments approved Thursday, May 14th, by the OU Board of Regents.

The regents also authorized the appointment of Leonard P. Eliel, M.D., cancer research scientist and former vice-president and director of research for the Oklahoma Medical Research Foundation, to the new post of director of OU Medical Center research and graduate affairs, effective June 1st.

The two appointments completed the reorganization of the medical center administration as requested by James L. Dennis, M.D., vice-president of medical center affairs. □

## DEATHS

HARRY A. DANIELS, M.D.  
1896-1970

Harry A. Daniels, M.D., 74-year-old Oklahoma City internist, died May 2nd, 1970. Born in Staples, Minnesota, Doctor Daniels graduated from the University of Minnesota Medical School in 1921. He became a Fellow of the Mayo Clinic before moving to Oklahoma City in 1932.

An emeritus clinical professor of the University of Oklahoma School of Medicine, Doctor Daniels was a member of the American College of Physicians, the Oklahoma City Academy of Medicine and the Nu Sigma Nu medical fraternity.

J. P. KELLER, M.D.  
1921-1970

J. P. Keller, M.D., 48-year-old Duncan physician died in Houston, April 19th, 1970. Born in El Reno, Doctor Keller graduated from the University of Oklahoma School of Medicine in 1951. The following year he established his practice in Duncan where he remained except for his service during World War II.

J. H. ABERNETHY, M.D.  
1912-1970

An Altus ophthalmologist, J. H. Abernethy, M.D., died April 18th, 1970. A native of Hollis, Oklahoma, Doctor Abernethy graduated from the University of Oklahoma School of Medicine in 1939. Following his service during World War II, he established his practice in Altus where he remained until his death.

J. WALKER MORLEDGE, M.D.  
1890-1970

J. Walker Morledge, M.D., a prominent Oklahoma City physician, died May 1st, 1970. A native of Cumberland, Ohio, Doctor Morledge graduated from the Western Reserve Medical School in 1919 and was one of the first residents at the University Hospital in Oklahoma City. He received two degrees in tropical medicine in London and became a member of the Royal College of Surgeons of England and a Licentiate of the Royal College of Physicians.

He served as a medical missionary for seven years in South Africa and entered private practice in Oklahoma City in 1930. He was affiliated with the Oklahoma City Academy of Medicine, the Southern Medical Association, the Society of Tropical Medicine, the Oklahoma Internists Association, the National Tuberculosis Association and the Alpha Omega Alpha.

Last year the Oklahoma State Medical Association gave special recognition to Doctor Morledge for fifty years of exemplary service to his profession and the public it serves.

HAROLD C. BRADLEY, M.D.  
1892-1970

A retired, Oklahoma City physician, Harold C. Bradley, M.D., died June 4th, 1970. A native of Sandwich, Illinois, Doctor Bradley moved to Geary, Oklahoma, in 1900. Following his graduation from the University of Oklahoma School of Medicine, he took his internship in Pennsylvania. After his service with the Medical Corps during World War I, he came back to Oklahoma to practice.

Doctor Bradley was a Life Member of the Oklahoma State Medical Association and the American Medical Association-sponsored 50-Year Club. □



## BOOK REVIEW

**STUDIES IN CLINICAL ENZYMOLOGY.** By D. P. Mullan, Consultant Physician, Salisbury Group of Hospitals; formerly Senior Medical Registrar, the United Sheffield Hospitals. Cloth, 238 pp. St. Louis: The C. V. Mosby Company, 1969. \$12.00.

This small book by English authors seems timely since clinical enzymology has been a rapidly expanding field in recent years and has developed to the point that some enzyme determinations are utilized routinely by the practitioner in diagnosing and following patients. While the text is not intended as a review of the whole of clinical enzymology,

it is diffuse in its coverage. Some sections are of general interest and others highly restricted.

There are eleven chapters, the first two of which are devoted to a general orientation and consideration of clinical enzymology. The brevity and clarity of these chapters is refreshing. The succeeding chapters deal with enzymology as it relates to a variety of problems including myocardial infarction, cardiomyopathies and non-ischemic heart failure; pregnancy; cervical carcinoma; diabetes mellitus; urinary tract disease and hypertension; cerebrospinal fluid; two chapters of more restricted interest consider studies

of Nairobi patients with various liver diseases including amoebiasis and African heart disease.

The book is spotty in quality and depth of coverage. The chapter on inherited metabolic and enzyme abnormalities contributes little which is not currently available in many standard textbooks. The chapters are well referenced.

Individuals with subspecialty interests will find selected sections of interest and value. However, so much of the material is of restricted interest that the book cannot be recommended for the general practitioner's bookshelf.—*J. Rodman Seely, M.D., Ph.D.* ☐

## Miscellaneous Advertisements

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**MED STUDENT SEEKS SMALL TOWN PRACTICE.** Senior OU medical student has advised the OSMA that he will commit himself to practice in a small Oklahoma town in return for a non-refundable loan of \$10,000. The student, whose name will be furnished by the OSMA office on request, will sign a contract to serve up to four years. However, it will be four years before he can begin private practice since he must complete his internship and serve three years in the navy.

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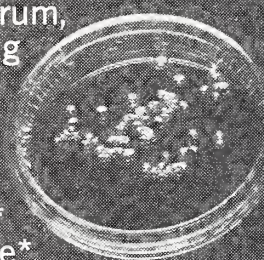
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JULY  
1970  
Vol. 63, No. 7

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## Chief Complaints: Fiscal

IT IS GENERALLY known that some of the most common "chief complaints" of patients, their friends and families are never expressed in the physician's office. They are related, with considerable vitriol and embellishment, at cocktail parties, luncheons, and other social gatherings. They are, at best, distorted half-truths and, at worst, the most popular prevailing form of slander. They are loaded with deception and Freudian implications.

In order to promote an accurate evaluation and a broader understanding of these curious gems of gossip, a few of them are presented herewith. Each "chief complaint" is given in typical form, followed by a somewhat more detailed and factual "explanation." There are, of course, many variations within each category but these are fairly representative examples of the standard form.

C.C.: "He didn't spend more than ten minutes with me and charged me ten dollars! That's a dollar a minute!"

**EXPLANATION:** The receptionist spent three minutes with him, the nurse ten, and the physician spent 15 minutes in the interview and examination, another five minutes completing the record. Preceding and following the office visit, there were three telephone calls from the patient, consuming a total of 18 minutes of the physician's time. In justifiable indignation, the patient has not paid the eight-month-old account.

C.C.: "It was a simple little operation and he sent me a bill for \$150.00! Even the insurance company said it was only worth \$75.00."

**EXPLANATION:** It was an abdominal operation which required the customary skill and training of a surgeon, a complete history and physical examination performed and recorded by the surgeon, two hours in the operating room, a detailed record of the procedure, about ten postoperative visits . . . and the usual liability. An office record was prepared; eight hospital forms, two insurance claims and a disability certificate were completed; two letters of "explanation" were sent to the insurance company and the

whole procedure was explained to five inquisitive relatives . . . separately.

The insurance policy was purchased through the mail ten years ago and "allowed" up to \$75.00 for abdominal operations. The check was received six weeks after the patient returned to work.

C.C.: "He knew that little old lady didn't have a penny and he still charged her \$20.00 for a house call!"

**EXPLANATION:** The physician was summoned by the "little old lady's" son (who owns three grocery stores and a large ranch); asked to get up, get dressed, and make a 22-mile round trip at 2:30 in the morning to administer treatment for symptoms which had been present for 36 hours.

The "little old lady" gave the ranch to her son to avoid estate taxes.

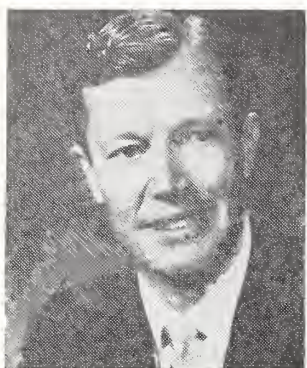
C.C.: "He turned my account over to a collection agency just because I hadn't paid it in full by the time he wanted his money!"

**EXPLANATION:** The patient has owed the physician \$340.00 for two years; made one payment of \$20.00 last year and two \$10.00 payments ten months ago. In the meantime, the patient has collected \$300.00 from his medical insurance, spent two weeks in Hawaii and purchased a camper, a boat and a 75-horsepower motor.

C.C.: "He made enough money practicing medicine to retire after only 15 years and live off the fat of the land!"

**EXPLANATION:** The physician spent four years in college, four years in medical school, one year in internship, three years in residency, four years in the military service, one year in a postgraduate refresher course and was in practice for 20 years. He married a rich woman; he or his wife inherited a half-million dollars from a wealthy (i.e., non-physician) relative or one of them is making a lot of money selling real estate, drilling oil wells, writing or playing the guitar.—MRJ □





The Bureaucratic Mind never ceases to amaze me. Its generosity with other peoples' time, talent and finance has always left me perplexed. This mind is quite innovative, articulate and creative but possesses little common "horse

sense." Few persons with this mind have ever met a payroll or had the responsibilities of a business on their shoulders, but as arm-chair philosophers "Probing the Cosmos" they have no peer. Time must be of little essence to them as it is bound to consume no end of it to come up with some of the absurdities they manage.

Circulating at the AMA in Chicago were various blueprints for occupying the physicians' professional time and talents. Some of the ideas proposed are almost maddening when one places them in proper perspective. Various foundations around the nation have tried to sell Health Care to hand picked groups. One such is the San Joaquin Foundation in California. Factual information furnished by physicians in this area proves it has functioned quite miserably in provid-

ing proper health care with a minimum of waiting. One aspect of this program (supposedly designed to save money) consists of information gained from outpatient interviews by paramedical personnel being computerized to determine the need for hospitalization; a pre-admittance utilization review.

A Senate Finance Committee has studied these foundations' operations and is considering placing computers in every state at some central location—coupled with district computer data processing to pre-review all Medicare and Medicaid hospital admissions. How they would staff these operations has not been fully decided but regardless this would almost completely circumvent physician-patient relationship.

The above is but one of many such programs being studied by government to implement its growing Federal Health Bureaucracy. How are we to counter these ill-planned proposals?

May I suggest continued support by membership—finance—and personal participation in your OSMA and AMA. Though these organizations are not without problems they will never improve without your continued support.

Sincerely,

*E. L. Carlson M.D.*



# An Epidemiologic Study of Reported Salmonellosis in Oklahoma, 1960-1968

HODGES L. MARTIN, M.D.  
STANLEY W. FERGUSON, Ph.D.  
JAMES W. JUSTICE, M.D., M.P.H.  
R. LEROY CARPENTER, M.D.

*Striking increases in the incidence of non-typhi salmonellosis, concomitant with a decrease in typhoid fever, presents a medical and public health dilemma in Oklahoma.*

**S**ALMONELLOSIS is an enteric disease produced by one of the more than 1,200 known species of salmonella. *Salmonella typhosa* (*S. typhi*) causes the most severe form of salmonellosis, typhoid fever. The other species are generally less severe and of shorter duration.

The reported incidence of salmonellosis is increasing rapidly throughout the United States.<sup>1</sup> This review will describe salient epidemiologic features of human salmonellosis in Oklahoma, hopefully of interest and value to state physicians in their encounters with this increasingly common disease.

## METHODS

The Oklahoma State Department of Health has maintained an enteric pathogen register since 1955. This register contains

information on all salmonella serotypes isolated from cases occurring in Oklahoma. Reports of cases other than *S. typhi* occurring prior to 1960 are not complete, therefore this discussion will be concerned primarily with those cases reported since this date. The methods employed for isolation of enteric pathogens by the State Department of Health laboratories are briefly described as follows:

Stool specimens or rectal swabs are sent through the mail or by special express to the laboratories in Oklahoma City. Some of these are placed in buffered glycerol saline holding solution. They usually arrive one to three days after collection. The fecal material is streaked directly on SS and Bismuth Sulfite Agar and also inoculated into Selenite Broth. Incubation at 37° C. is maintained for 48 hours unless positive growth is noted at 18 hours. Suspected *Salmonella* growths are planted on Klegler's Iron Agar Slants, Lysine Iron Slants, and S.I.M. media. Serotypes are identified by agglutinations with somatic and flagellar antigens. Equivocal reactors are referred to the Salmonellosis Laboratory of the National Communicable Disease Center of the U. S. Public Health Service, Atlanta, Georgia. This method is the currently recommended procedure by Edwards and Ewing of the National Surveillance Center. This service is available at no cost to state physicians for diagnostic support in suspected enteric infections.

The data from the Enteric Pathogen Register have been analyzed by age, race, place of residence, date of onset, and serotype of the organism isolated, and the results are discussed below.

## RESULTS

Figure 1 shows that the incidence of reported typhoid fever in Oklahoma has stead-

From the Oklahoma State Health Department and the University of Oklahoma Medical Center.



NUMBER OF TYPHOID AND OTHER SALMONELLA INFECTIONS REPORTED TO OKLAHOMA STATE HEALTH DEPARTMENT 1946-1968

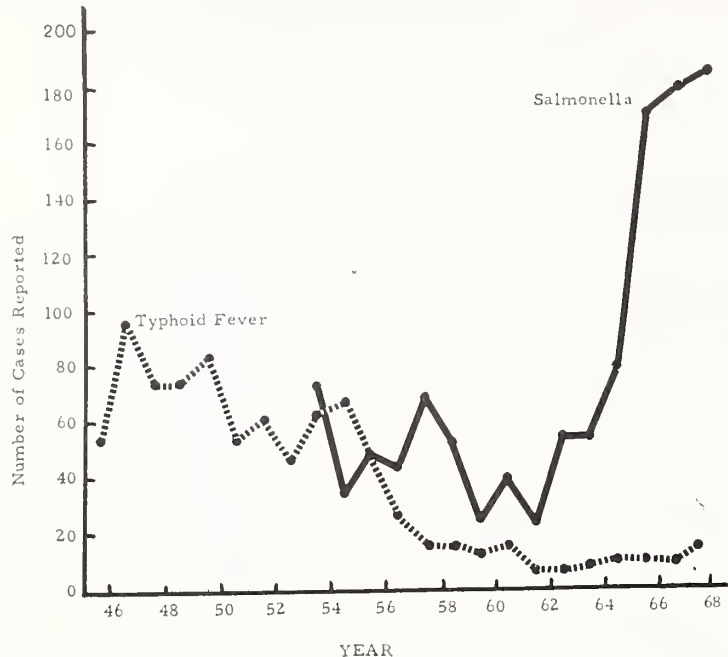


Figure 1

ily decreased from a peak of almost 100 cases in 1948 to an average of less than 10 cases per year since 1962. However, the incidence of other reported salmonella infections has increased from 75 cases in 1954 to 187 cases in 1968. (No salmonellosis data is available for the period prior to 1954.) Essentially identical trends are observed in national figures for the two diseases, and point to changing needs in salmonella surveillance and control.

Some of the increase in salmonellosis observed in Figure 1 is no doubt the result of greater scope of reporting in recent years. Greater availability of laboratory facilities results in positive identification of many diseases that were diagnosed incorrectly in the past. However, much of the increase apparently is “real” and points toward a public health problem not fully realized before typhoid fever was brought under control.

Figure 2 shows salmonella incidence examined by age and race. Unfortunately a number of cases could not be included in this presentation because of inadequate identifying information supplied with the specimen and report. Interpretation of the data in Figure 2 should consider such ill-defined sources of selection. All non-white cases have been combined in this presentation because of their exceedingly small numbers.

DISTRIBUTION OF SALMONELLA INFECTIONS BY AGE AND RACE, REPORTED TO THE OKLAHOMA STATE DEPARTMENT OF HEALTH, 1960-1968

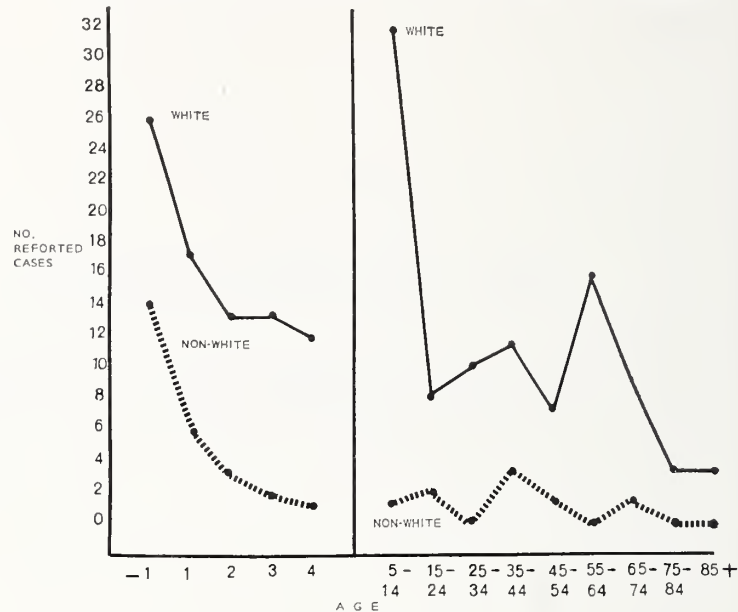


Figure 2

There are essentially no differences in the sex distribution of reported cases. It should be noted that one-year age intervals are used for early childhood (under age five) when the incidence of Salmonella infections is greatest. Ten-year age categories are used above age five. These data demonstrate a classical age and racial distribution for non-typhoid salmonellosis, the greater number of cases occurring in early childhood where resistance may be less, and where fecal-oral transmission is more difficult to control.

One possible departure from the expected white and non-white age distributions is the precipitous drop observed from age category 5 to 14 to category 15 to 24 in whites that is not present among non-whites. This may be cautiously interpreted as differences in environmental or personal sanitation in that disease incidence does not fall to as low a level in non-whites as in whites, but levels off at a comparatively high incidence. Race-specific incidence rates support this finding. Another possible interpretation would be a high level of disease resistance in the 5 to 14 age category in non-whites. This is possible as a result of a high level of infection in the younger ages with a subsequent high level of acquired resistance. Whites in age category 5 to 14, on the other hand, would be expected to have a lower level of acquired immunity and a resultant higher incidence. In general, non-whites have a significantly higher incidence than whites, and this difference is particularly great in



# GEOGRAPHIC DISTRIBUTION OF SALMONELLA INFECTIONS IN OKLAHOMA REPORTED TO THE STATE HEALTH DEPARTMENT, 1960-1968

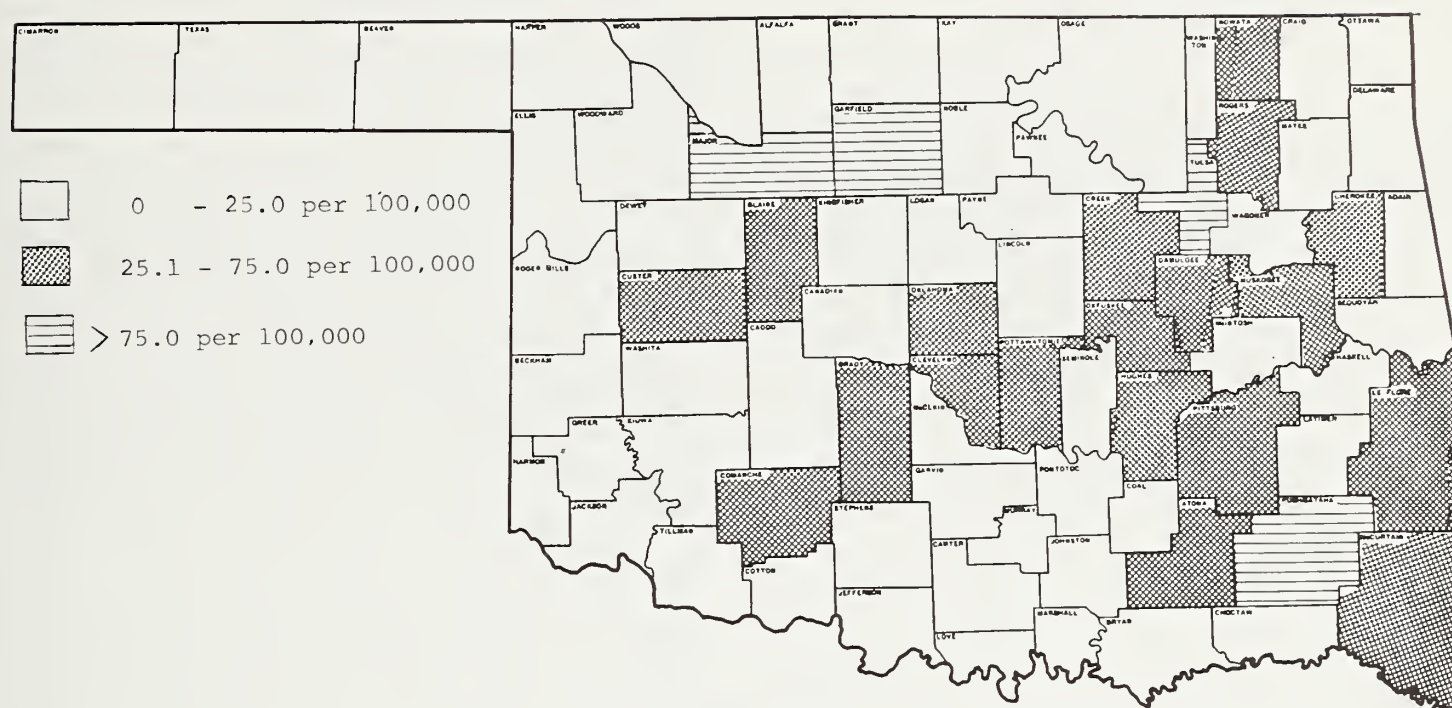


Figure 3

the under five year age category.

Figure 3 shows the geographic distribution of reported and bacteriologically confirmed salmonella infections. The high rates observed in Garfield and Major counties are explained in part by a single outbreak of salmonellosis in Enid in 1966. Superior infectious disease surveillance from this area of the state is also a probable cause. Tulsa County also experienced an unusual number of cases from 1960-68. No specific outbreak is thought to be implicated in the

Tulsa County experience, though excellent laboratory facilities there may be responsible for a difference in reporting. Population concentration alone is probably not important in the Tulsa County experience since Oklahoma County with a comparable or greater population concentration has a significantly lower incidence rate. Pushmataha County in Southeast Oklahoma also experienced a high salmonella incidence rate. This is thought to be related to socioeconomic and sanitation factors although it is not clear why adjoining counties with similar factors did not experience comparable incidence. There were no reported "outbreaks" in Pushmataha County between 1960-68.

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Generally speaking, salmonellosis appears to be more prevalent in the eastern half of Oklahoma. Approximately twice as many eastern as western counties show elevated incidence. This might be related to ecological differences, such as difference in rainfall from east to west, etc. Certain population and socioeconomic differences are observed from east to west also, the population being generally more dispersed and more affluent toward the west. The level of reporting might also vary from east to west in a similar fashion.

Figure 4 shows the distribution of report-



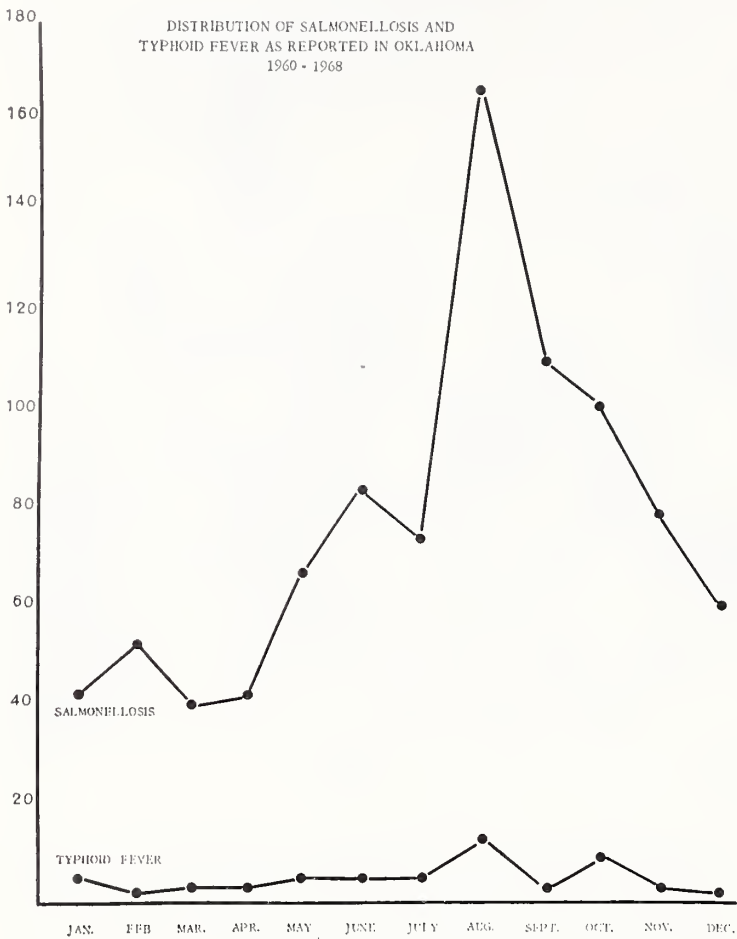


Figure 4

ed cases of *Salmonella typhi* and other salmonella infections from 1960-1968 by month of the year. The familiar peak in August has often been interpreted as a result of exposure due to picnics, summer outings, etc., involving food. This peak might seem a bit late in the summer to support this interpretation, but this can be attributed to delays in diagnosis, reporting, etc. Both typhoid fever and the “other salmonelloses” show this peak.

Table 1 shows the mortality from typhoid fever and non-typhoid salmonelloses. Whereas non-typhi salmonella infections are usually fatal only in the very young and very old, the more virulent typhoid fever is associated with a less age-dependent mortality, with deaths observed in the 15 to 34 and 35 to 54 age categories in addition to the extremes of life.

DISCUSSION

Aside from a few species, such as *Salmonella pullorum* and *Salmonella typhosa* which occur mostly in fowl and man respectively, the Salmonellae colonize almost all warm-

Table 1.  
REPORTED DEATHS FROM SALMONELLOSIS AND  
TYPHOID FEVER  
by Age in Oklahoma 1960-1968

Age	15	15-34	35-54	55-74	75+	Total
Salmonellosis	5	—	—	5	1	11
Typhoid Fever	2	1	1	—	1	5
Total	7	1	1	5	2	16

blooded and many cold-blooded animals with equal facility.<sup>2</sup> This probably accounts in part for the clearly different patterns of incidence between *Salmonella typhosa* and the other Salmonellae as shown in Figure 1. With adequate sewage disposal, protection of water supplies, restrictions on harvesting and consumption of shellfish from certain waters, and the exclusion of typhoid carriers from food handling, the incidence of typhoid fever has plummeted. These same measures, however, apparently have been ineffective in suppressing the other salmonelloses. There are only a few studies suggesting perpetuation of closed cycles of non-typhoid salmonellosis via man-to-man transmission.<sup>2</sup>

Many animals and animal products have been found to contain Salmonellae.<sup>3</sup> It is well known that poultry and their commercial feeds, eggs, pork products, and improperly pasteurized milk and milk products contain Salmonellae. Also commonly infected or contaminated are domestic pets, rodents, dried yeast, dessicated thyroid, coconut powder, cereals, and symptomatic and asymptomatic human carriers.

An effective treatment for salmonellosis is not yet available. Antibiotics should probably not be used to treat the uncomplicated disease, since they have been known to prolong the carrier state.<sup>4</sup>

To illustrate the potential magnitude of man's exposure to the Salmonellae, it was found in one survey of 5,000 samples of spray-dried whole eggs, that 35 percent were contaminated.<sup>5</sup> Potential human exposure is obviously great and may be increasing with greater usage of prepared food products, the pooling of food products, and the increasing size of poultry, swine, and cattle feeding pens.

SUMMARY

Reported *Salmonella typhosa* infections



from 1946-1968, and other reported salmonella infections from 1960-1968 are reviewed. A dramatic decline in *Salmonella typhosa* incidence and an equally dramatic increase in the incidence of other salmonellosis are evident. Peak incidence occurs during the summer months and is highest in August. Race and sex information of reported cases is very inadequate; however, existing data indicate that non-whites under one year of age have the highest incidence. The reported incidence is higher in the eastern half of the state. *Salmonella typhosa* is associated with mortality in all age groups whereas the other salmonella serotypes are usually fatal only in the very old and the

very young. If present trends continue, we can expect to see more salmonella gastroenteritis in Oklahoma in the future. □

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WAGE AND HOUR LAW

Several clinics in the Oklahoma City area have been contacted by investigators of the Wage and Hour division, United State Department of Labor. Investigators have demanded to audit payroll and other records.

Legal counsel for the state medical association has advised that anytime a wage and hour investigator comes to an office he should be referred to the doctor's attorney, or to an attorney who is familiar with the wage and hour law. All auditing should then be done under direction of the attorney.

In some instances the investigators have interfered with the operations of a clinic by interrogating employees about various facets of their employment during working hours. These interferences can be avoided, or at least controlled, if the investigator is required to work through a physician's attorney.

The wage and hour law is complicated and there is some uncertainty as to whether, and to what extent, the wage and hour law applies to medical clinics. Each situation must be studied separately to determine whether it applies. □



# Malignant Carcinoid of the Ampulla of Vater

H. JACK BROWN, M.D., F.A.C.S.

*Carcinoma of the Ampulla of Vater,  
rarely considered as a cause of  
obstructive jaundice, may be successfully  
managed by adequate extirpative surgery.*

SINCE THE TERM carcinoid was coined by Oberndorfer in 1907,<sup>7</sup> these tumors have been described in all portions of the gastrointestinal tract from the cardia to the anus. Carcinoids may arise in the bronchial tree, the ovaries, pancreas, gallbladder and even in teratomas, but over ninety percent originate in the intestinal mucosa. These tumors make up one per cent of all malignant lesions in the gastrointestinal tract, and eight per cent of neoplasms of the small intestine. A single focus of tumor is the usual finding but multiple lesions have been reported in as many as twenty per cent of the cases of carcinoid. It is therefore mandatory that a careful search of the entire bowel be performed in order that a second primary not be overlooked. In a large series of 509 carcinoids only one percent arose in the duodenum.<sup>8</sup> Thus carcinoid tumors are rarely considered in the differential diagnosis of obstructive jaundice. Since the first report by Brentano in 1920 of carcinoid of the

ampulla of Vater there have been six subsequent cases reported.<sup>1, 2, 3, 5, 6, 9</sup>

## CASE REPORT

A 63-year-old white male entered the hospital following a bout of syncope. He was found to be jaundiced with an 8 x 14 cm. mass lying horizontally in the upper mid-abdomen. In addition, he was noted to have extensive subcutaneous neurofibromatosis. Total bilirubin was 4.1 mg. percent with a 3.0 mg. percent direct fraction. Alkaline phosphatase was 558 International Units. Other liver function studies were compatible with obstructive jaundice. Urine for 5-hydroxyindoleacetic acid was negative. Fasting blood sugar and two hour postprandial blood sugar were normal. A liver scan revealed an enlarged liver with no masses. Barium enema and upper gastrointestinal barium studies were normal with the exception of anterior displacement of the stomach.

On July 24th, 1967 the abdomen was explored and a 2.5 x 1.5 cm. submucosal duodenal mass was found blocking the ampulla of Vater. The main pancreatic duct was tremendously dilated, measuring eight cm. in diameter and covered by a thin shell of atrophic appearing pancreas. It contained approximately 250 cc. of opalescent fluid. The common bile duct was four cm. in diameter. A 1 x 1.5 cm. lymph node was posterior to the head of the pancreas. The ampul-



lary lesion and the lymph node were biopsied and the frozen section report was adenocarcinoma in both. Believing we were dealing with carcinoma of the ampulla of Vater, a radical pancreaticoduodenal resection and vagotomy was performed. Reconstruction was remarkably easy due to the extreme dilatation of the common hepatic duct and the duct of Wirsung. After examination of the permanent tissue specimens and consultation with the Armed Forces Institute of Pathology (#1255719), a diagnosis of carcinoid of the ampulla of Vater with metastasis to two of nine lymph nodes was established. Marked pancreatic and biliary ductal ectasia was a secondary diagnosis.

The patient's postoperative course was uncomplicated. Since his operation twenty-six months ago he has felt perfectly well and has gained ten pounds. He works eight to ten hours a day as a farmer-rancher. There has been no recurrence of jaundice and no symptoms suggestive of the carcinoid syndrome. Periodic urine 5-hydroxyindoleacetic acid determinations have remained negative. Mild diabetes mellitus present immediately after the operation has cleared completely.

#### DISCUSSION

Recently, Weichert suggested that carcinoid and islet cell tumors share a common origin from the argentaffine cell.<sup>10</sup> He described both an ulcerogenic and a nonulcerogenic variety based on clinical grounds. The Armed Forces Institute of Pathology suggested that the lesion in our case be called a "carcinoid-islet cell tumor" based on this report.

Of the reported cases the average age of the patients was fifty-three years with a range from forty-one to sixty-nine years. In

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the seven cases, including the present one, where the symptoms and findings were known, (this information is not available regarding Brentano's case), the following facts can be determined: There were four males and three females. Clinical jaundice was present in six. Three patients complained of abdominal pain and two of diarrhea. Four tumors were seen preoperatively on upper gastrointestinal barium studies and appeared as smooth, filling defects. The upper gastrointestinal radiogram was remarkable in our patient because of the anterior displacement of the stomach produced by tremendous dilatation of the duct of Wirsung. However, the primary tumor was not visible. A search of the literature has failed to uncover any reference to extreme pancreatic ductal ectasia as encountered in our patient. Extreme slow growth of these neoplasms probably accounts for this finding. In the reported cases the primary lesions varied from 8 x 5 cm. to 1.5 cm. in size. Positive nodes were removed in three of the cases, and it is interesting that these three were among the five long-term survivors. Of the eight reported cases only one patient died of histologically proved recurrent carcinoid. This death occurred twenty-one months postoperatively and was a case treated by transduodenal local excision of the tumor.<sup>6</sup> In the one other patient treated by radical pancreaticoduodenectomy, the patient died of metastatic neoplasm four years and eight months postoperatively. This particular patient had widespread neoplasia but there was no histologic proof that it was the same tumor.<sup>9</sup> Of the reported cases, one was treated by retroperitoneal removal of the tumor,<sup>1</sup> four were treated by wide local excision with reimplantation of the common duct and duct of Wirsung,<sup>2, 3, 5</sup> one was treated by simple local excision<sup>6</sup> and two were treated by radical pancreaticoduodenectomy.<sup>9</sup>

Wide local excision with reimplantation of the biliary and pancreatic ducts seems to be the treatment of choice. If one cannot differentiate a carcinoid from an adenocarcinoma at the time of surgery, as in our case, then a pancreaticoduodenectomy should be accomplished. In differentiating these two lesions, the carcinoid presents as a polypoid or intramural mass without mucosal ulceration.



tion. On cut section, the surface bulges slightly and often appears yellowish. There is an absence of necrosis. Microscopically, there are small uniform epithelial-like cells arranged in solid masses, cords or bands, separated by capillaries, and a small amount of connective tissue stroma. Mitotic activity is inconspicuous and there is an absence of atypical mitoses. There will be an intact, though often thin and distorted, mucosal epithelium over the neoplasm. Argentaffine granules may or may not be demonstrated. These tumors are probably all malignant and a search should be made for metastases, particularly within adjacent lymph nodes. Metastatic masses should be excised either en bloc with, or separate from the primary neoplasm depending on their location. In the case presented by Goldsmith, there were two large metastases in the mesentery of the proximal jejunum which were excised separately from the primary lesion at the ampulla of Vater. A second look procedure at fourteen months was completely negative and the patient was alive and well two and a half years following that second look procedure.<sup>3</sup>

I can find no reference in the literature of von Recklinghausen's neurofibromatosis and carcinoid tumors occurring in the same patient. However, a possible relationship exists as Masson in 1914 attributed the argentaffine cell, which is the cell of origin of carcinoid tumors, to be of neurogenic or-

igin.<sup>4</sup> As the histologic types of neurogenic lesions in von Recklinghausen's disease normally show great variation, it is interesting to speculate on a relationship in our case.

#### SUMMARY

In summary, a rare case of malignant carcinoid of the ampulla of Vater occurring in a patient with von Recklinghausen's neurofibromatosis has been presented and discussed. Extreme pancreatic ductal ectasia appeared to be a unique finding in this case. The seven previously reported cases have been summarized and the conclusion is reached that in these neoplasms, wide local excision with reimplantation of the pancreatic and biliary ductal systems, and excision of all gross metastatic lesions is the treatment of choice. □

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# Autism Revisited

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JAY T. SHURLEY, M.D.  
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WILLIAM J. MAIER, M.D.

*A sustained decrease of environmental stimuli in a sensory isolation room permanently reduced withdrawal from human contact in three children with autistic defenses.*

## INTRODUCTION

IN 1943, Leo Kanner, M.D., described a syndrome in his paper, "Autistic Disturbances of Affective Contact."<sup>1</sup> The major symptoms and signs of this disorder, which he called "early infantile autism" the following year,<sup>2</sup> were: 1) An inability to relate to people and a failure to assume anticipatory posture preparatory to being picked up. 2) Extreme autistic aloneness. 3) Excessive masturbatory orgasmic gratification from rolling and other rhythmic motions. 4) An obsessive desire to maintain sameness, and an involvement primarily with inanimate objects. 5) Little or no speech. If speech were present, it was described as non-communicative, echolalic, with no use of personal pronouns. 6) Islands of normal intellectual functioning. 7) Normal physical findings.

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8) As a relative constant, parents who were cold, intellectual and aloof.

Soon other papers began to appear in the literature with similar descriptions of this entity and with suggested etiologies ranging from purely psychogenic factors to genetic abnormalities and constitutional predisposition.

Proposed treatments included psychoanalytic treatment of the parents and child, psychosurgery, high doses of psychotropic drugs and more recently, operant conditioning. Irrespective of the type of treatment employed approximately one-third of the children improved, one-third remained marginal in their adjustment with autistic defenses still overtly present, and one-third regressed, requiring institutionalization.

Both in reviewing the literature and in carefully observing children using the autistic mode of defense, the authors of this paper have been impressed that one cannot avoid the almost eerie feeling that these children are, indeed, very skillfully avoiding human objects. Kanner, in his original paper, commented on the "extreme autistic aloneness that, whenever possible, shuts out anything that comes to the child from the outside." Direct physical contact, motion, or noise that threatens to disrupt the aloneness is treated either "as if it were not there" or painfully resented as a distressing intrusion. Bender<sup>3</sup> states, "It is my experience that autism in young children is a primitive way of reacting when a disorganized or unorganized brain cannot deal with the impact of internal or external stimuli." Mahler,<sup>4</sup> in describing the function of autism, states, "In short, it seems as though these



patients experience outer reality as an intolerable source of irritation."

Our impression is that in a number of children with childhood psychoses and related conditions, the autistic defense is directed at overwhelming inner and outer stimuli. Miller<sup>5</sup> offered the concept of "input underload" and "input overload." He offered maternal deprivation as an example of "input underload." Miller's experiments demonstrated that as input increased, output responded to a point until the system broke down. Our research team has postulated that many children utilizing autistic defenses withdraw in a general way from any and all types of uncontrollable stimuli because of defective central nervous system filtering. We reasoned that by placing these children in a sensory deprived environment we would support their defensive needs and thereby decrease their need to constantly activate withdrawal symptoms. If the autistic child could be deprived sufficiently of stimuli, a "stimulus hunger" would occur that could be satisfied by human contact.

Cohen<sup>6</sup> and Charney<sup>7</sup> both have used sensory deprivation in children with behavior disorders. They felt this mode of treatment was useful to loosen defenses and increase ability to acknowledge dependency needs. Thereby, the children could make better use of available adults. Luby<sup>8</sup> in his work with adults suggested, "The isolation setting may be one which presents to the schizophrenic subject a more balanced relation between input load and reception interpretation capacity. The withdrawal may represent an attempt by the patient to reduce input overload, resulting in a form of learned self-imposed sensory isolation."

#### EXPERIMENTAL METHOD

A regular ten by twelve foot room at the Clinical Research Center attached to Children's Memorial Hospital was modified to provide sensory deprivation. The room was insulated against light and sound, and all excess hardware and room furnishings were removed. The room temperature was held at a constant 76° and the light intensity was held at approximately five-watts by a

special electrical system. A fan was placed above the false ceiling and provided a constant masking noise. A microphone, hung six feet above the floor, was connected to an intercom at the nursing station to allow constant monitoring.

The child was placed in the room with a minimum of clothing and a mattress on the floor. The nurses were instructed to observe the patient visually through an observation window at least five minutes every two hours. During three of these observation periods, the nurse was to take food into the room, set the tray on the floor and then withdraw to allow the patient about 20 minutes to eat. The nurses were instructed not to talk to or touch the patient other than to stroke the cheek gently to awaken him for meals. A therapist entered the room for ten to fifteen minutes twice a day at random times. At first the therapist sat passively accepting approaches by the patient, but later he became more active in initiating and responding to interaction. Toward the end of the experiment, stimulation was increased. Lights were turned up during meals and during contacts with the therapist. The therapist took the child out of the room periodically for a regular bath and the parents were gradually reintroduced to the child. During the last several days the door to the room was left open to provide free exit and entry.

At the end of each observation or intervention, the staff members involved filled out observation check lists which were later analyzed to study the progress of the experiment.

#### PATIENTS

The three children who have participated in this experiment so far were five-year-old boys. The first was in the sensory deprivation room for 68 days, the second for 40 days, and the third for 73 days. The histories of these boys are quite parallel with a few major exceptions. The first child was the eldest of three children, the third child the eldest of four children, whereas the second boy was an only child. We considered the parents of the second child a great deal like Kanner's description of intellectualized and aloof parents, whereas the first and the



third child's parents seemed warm, interested and involved with their children.

All of the boys seemed to develop relatively normally during the first year and they all developed a small initial vocabulary. S, the first child, had no speech for three years prior to the experiment and only hummed as he rocked rhythmically. L, the second child, also had no speech and said

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only "oi-oi" as he walked constantly in circles. J, the third child, had some speech that was only echolalic and uncommunicative. He would spin gracefully like a top, skillfully avoiding anything in his path. None of the children made meaningful eye contact with other persons and they were all involved entirely with inanimate objects to the exclusion of animate ones. We were uncertain about the intellectual capacities of these children although the parents and friends felt that they knew many things. S was small for his age and had a bone age of three and one-half years, but no other physical or laboratory abnormalities were noted. L, who was of normal height and weight had diffuse random spiking on his EEG and displayed an alternating strabismus. J was also of normal height and weight and had no physical or laboratory abnormalities.

#### REACTIONS TO THE SENSORY DEPRIVATION

All of the children actually appeared not only more comfortable but happy and pleased in the experimental room. Sounds of babbling and laughter emitting from the intercom were reassuring to the staff, other patients and the childrens' parents.

Each of the boys attempted to push the therapist from the room at some time during the experiment. S and L made no attempts to leave the room when the door was open. J did attempt to open the room door and leave with the therapist late in the experiment when he seemed especially hungry for human contact. All three of the boys were remarkably alert day and night. Yet, one of the initial differential diagnostic considerations in all of them had been deafness.

The point in time most related to an increased desire for human contact was a shift in day-night sleep waking patterns. S and L made this shift after several weeks, while J did not make a definite shift until the eighth week.

When S first saw his parents on the 45th day, he gave no signs of recognition. Six days later when the father entered the room, S crawled on his lap, looked at him and played with him. The father was so moved that he began to cry, whereupon S gently wiped away his tears. The father stated that this was the first time in his life that



S had treated him as a human being.

L was stiff and aloof during the first few visits with his parents. By the fourth visit he demonstrated open affection for both parents. He also initiated physical contact with the staff members and let himself be held.

When J first saw his mother he sat up on her lap, held her face with his hands, and looked directly into her eyes. When he saw his father through the observation window he yelled "Daddy!," whereupon the father burst into tears.

During their stays in the experimental room, each of the boys made sounds that were identified as words by the nursing staff. On a number of occasions, the authors heard verbalizations that could easily be identified as communication. The staff members were enormously impressed by the amount and intensity of eye contact made by the boys.

#### POST-DISCHARGE

All of the boys have evidenced constant increased social contacts and no longer isolate themselves. Each family had sought help when the child's behavior had become intolerable in the home. After the period of sensory deprivation, the boys were able to adapt to family life with a minimum of dis-

turbance. All three boys are attending nursery school classes and have enjoyed and profited from the experience.

#### SUMMARY

Three children with autistic defenses were put in a sensory deprived room. The theoretical base for this treatment was the idea that these children suffer from an inability to filter adequately incoming stimuli and that the autistic defense is directed psychologically against all stimuli. The first child was in the room for 68 days, the second for 40 days, and the third for 73 days. All of the children definitely decreased their withdrawal and autistic defenses. They have developed and maintained the desire for human contact on return to their families. □

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## DPW and OSMA Establish Suspension and Revocation Guidelines

Federal regulations require each state to establish a method to be followed when it becomes necessary to suspend or revoke the billing privileges of a physician under the Medicaid (Title XIX) program. Oklahoma's Department of Public Welfare and the OSMA have established guidelines to control such a situation.

Oklahoma's federally approved Medicaid (Title XIX) plan gives the Department of Public Welfare discretionary authority to suspend or revoke a physician's Medicaid billing privileges for cause. The plan was amended to provide a system whereby a physician in danger of losing his billing privileges could be counseled with and given a hearing before a group of his peers, if he so desired, before any such action would be taken.

The guidelines to be followed for such a hearing were adopted in principle by the OSMA Board of Trustees in April. Final form of the guidelines was completed in early June and adopted by the Oklahoma Public Welfare Commission on June 11th.

The guidelines provide for the use of the already existing Medical Insurance Review Committee of the OSMA. The existing policy of the review committee will be followed in reviewing cases involving probation, suspension or revocation. The new guidelines give the review committee more disciplinary power than that provided under the original policy.

The complete guidelines are set out below.

### Guidelines

#### I. General:

It is the desire and policy of the Oklahoma State Medical Association to work, through regular channels, with the State Department of Public Welfare in the Department's administration of the Medicaid Program provided for by Title XIX of

the Social Security Act. This relationship, suggested by the Oklahoma State Medical Association on May 21st, 1957, has continued to date. The Federally approved Title XIX Plan of the Department has been amended to vest in the Department discretionary authority to suspend or revoke a physician's Medicaid privileges for cause. The Oklahoma State Medical Association has agreed to review physicians' Medicaid claims referred to it by the Department; and on April 28th, 1970 the Board of Trustees of the Association approved the concept outlined in these guidelines.

#### II. Cause for Probation, Suspension or Revocation:

A physician should be placed on probation or should have his Medicaid billing privileges temporarily suspended or denied if he is determined to be over-utilizing the program.

For the purpose of these guidelines, over-utilization is defined as an excessive quantity of medical services rendered to Medicaid beneficiaries, as documented over a sufficient period of time to demonstrate a pattern of practice. In evaluating potential over-utilization, consideration should be given to the frequency of treatment, the type and number of services rendered in relationship to the diagnosis or diagnoses, and the ratio of Medicaid clientele as a percentage of the physician's total practice.

#### III. Procedure:

The "Organization and Procedure" policy of the Medical Insurance Review Committee will be followed in reviewing cases involving probation, suspension or revocation, and this policy statement is attached hereto and made a part of these guidelines.

The Medical Insurance Review Committee, based on a specific charge and documented evidence presented by the Department of Pub-

lic Welfare, may make one of the following recommendations to the Department:

**A. Probation:** In lesser cases of potential over-utilization, the Committee may recommend that the physician be placed on probation for a period of 90 days and will furnish the physician with corrective guidance toward compliance with the law, regulations and intent of the Medicaid program. During this period of time, the physician should retain his Medicaid billing privileges. At the end of the period of probation, the Committee will review his performance during the period and may recommend that the physician be returned to normal status or that his billing privileges be suspended.

**B. Suspension:** In cases where the original charges and documentation are of a more serious nature, or in cases where sufficient improvement was not obtained during the probationary period, the Committee may recommend that the physician's billing privileges be suspended for a period not to exceed 90 days. At the end of this period, the case should be reviewed by the Department and by the Committee, and the Committee may recommend that billing privileges be restored.

**C. Revocation:** In cases where it is deemed that the physician's conduct represents gross abuse of the Medicaid program, the Committee may recommend complete revocation of Medicaid billing privileges, and may further recommend disciplinary proceedings by the association.

**D. Dissent:** In cases where the Committee believes the charges and documentation presented by the Department of Public Welfare are not sufficient to warrant probation, suspension or revocation, the Committee shall recommend that the charges be set aside.



## SSA Continues Physician Fee Freeze

### IV. Formal Hearing:

If a physician-member requests a formal hearing to be conducted by the Department of Public Welfare, the Chairman of the Medical Insurance Review Committee should be given the opportunity and should have the responsibility to present the Committee's views at the hearing.

### V. Fraud:

If, upon the investigation of the Department of Public Welfare, it is determined that charges of fraud should be brought against a member of the Oklahoma State Medical Association, counsel for the Department should give prior notice and particulars to counsel for the Association.

### VI. Mutual Trust:

While it is recognized that an agency of government cannot delegate final responsibility to a non-governmental organization, the concept of peer review cannot function effectively unless its opinions and recommendations are highly regarded by the responsible governmental agency.

### VII. Annual Review:

In order to review and revise these guidelines based on accumulated experience, it shall be renewable on an annual basis. ☐

## Doctor Snow Honored For Teaching Achievement

James B. Snow Jr., M.D., professor and head of the Department of Otorhinolaryngology at the University of Oklahoma Medical Center, is one of seven recipients of the 1970 OU Regents' Awards for Superior Teaching.

Only 31 members of the general faculty have received the honor since the awards were established in 1964. Other honorees this year are from the fields of drama, mathematics, modern languages, journalism, the history of science, and English.

Nominations are made by academic departments, with final selection by a committee of the Board of Regents. ☐

Physician's fees under Medicare, which have been frozen since early 1969, were due to be open for reconsideration on July 1st of this year. The Social Security Administration has now announced that the freeze will be continued temporarily.

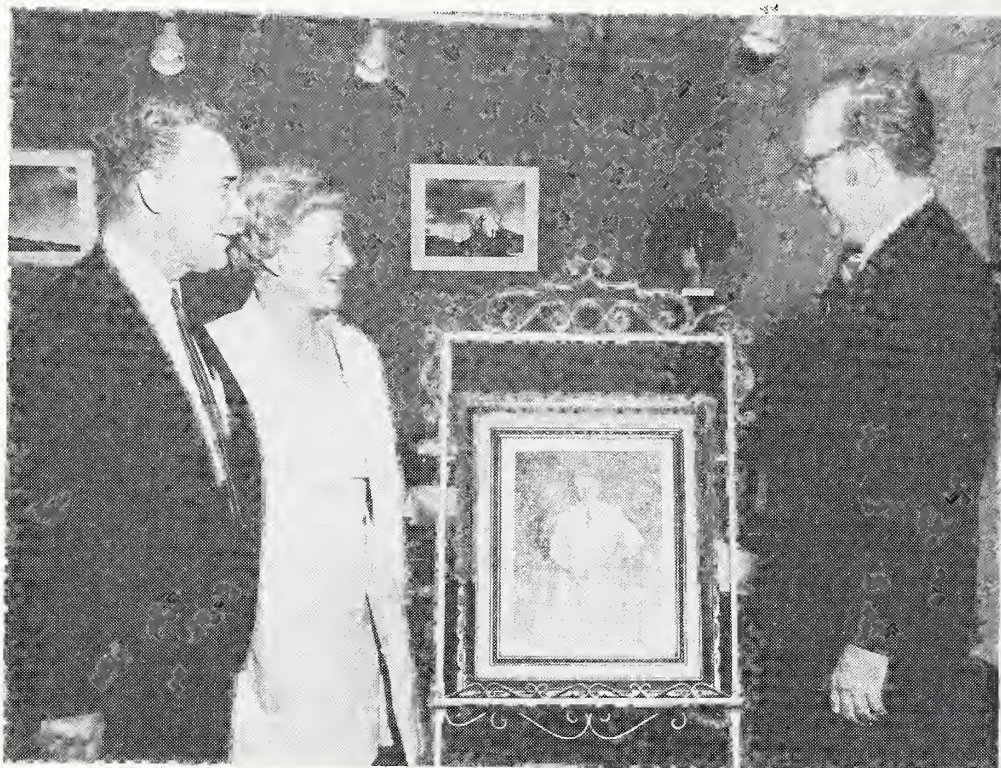
In a Social Security Administration press release, it was stated that the fee freeze was continued because of a bill passed by the U. S. House of Representatives, and being debated by the U. S. Senate, would change the method of determining prevailing fees. The press release said, "upon the suggestion of a number of carrier representatives, key members of the medical profession, and the Health Insurance Benefits Advisory Council, the Social Security Administration decided to avoid confusion for beneficiaries and providers of services by postponing any changes in present levels of reim-

bursement until the issue has been considered by the Senate."

The bill in question was passed by the House of Representatives on May 21st and provided for the establishment of prevailing levels at the 75th percentile in reimbursing for Medicare services provided during the 12 month period that begins July 1st, 1970. In April of this year Medicare carriers had begun the operations needed to convert charge data accumulated in 1969 into new customary and prevailing charges that would be set at the 83 percentile or its equivalent—i.e., the level of customary charges made by 83 percent of the physicians in a locality. The 83 percentile level is provided for by the current law.

In its news release the administration stated, "... it is probable that changes in Medicare will be enacted during this session of Congress . . . " ☐

## Faculty Honors Stewart Wolf, M.D.



Farewell festivities for Stewart Wolf, M.D., who left the University of Oklahoma Medical Center this spring to become director of the Marine Biomedical Institute at Galveston, included a faculty reception at which he was given a replica of his portrait commissioned by the Department of Medicine. Doctor Wolf, left, Mrs. Wolf and James F. Hammarsten, M.D., department head, view the smaller painting. The life-size original will hang at the Medical Center. For 15 years head of the Department of Medicine, Doctor Wolf since 1967 has been Regents professor of medicine and psychiatry and professor of physiology. ☐



## Physicians Urged To Report Fee Cuts

At the direction of the House of Delegates, OSMA President, Ed L. Calhoun, M.D., has written all association members asking them to report instances of fee cuts by either Medicare or Medicaid. During its May meeting the House adopted a resolution directing the letter be sent from the President.

The President's letter points out that the Medical Insurance Review Committee of the association was established to assist physicians and various government health program carriers to settle fee disputes. The review of a fee can be instigated by either the physician or the carrier.

The letter went on to say, "cases referred to the committee by individual physicians usually involve situations where a fee has been drastically cut. However, in order for the committee to operate properly it needs to know about any cut in a fee."

The House of Delegates resolution urged all association members to refer any fee cut, no matter how small, to the Medical Insurance Review Committee. Also, all physicians were requested to report any instances where the various health program carriers tell a physician that his individual fee profile is different from that which the physician thinks it is or from that which other carriers report.

Any information regarding fee cuts or erroneous profiles should be forwarded to the Medical Insurance Review Committee in care of the OSMA, 601 N.W. Expressway, Oklahoma City, Oklahoma 73118. □

## House Urges Procedural Terminology Use

All members of the OSMA are being encouraged to begin using the new second edition of the AMA's book *Current Procedural Terminology*. The second edition was published earlier this year and changed from a four to a five digit coding system.

In a resolution passed by the OSMA House of Delegates during its May meeting it was stated, "...

## Points Takes National Office



Mrs. Tom Points looks on while her doctor-husband is sworn in as the new Deputy Assistant Secretary for Health Services for the Department of Health Education and Welfare, Washington, D.C. Doctor Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs for HEW assists Mr. Mahlon Dewey, HEW Personnel Officer, in the official "swearing in." The ceremony took place on June 15th in the HEW Building in Washington. □

one of the important obligations of medicine is to: 1. Accurately and completely describe all of the medical services which (physicians) provide, 2. To compile them in a logical fashion with appropriate blank spaces for future services, 3. To take into account all the variables which are, or may become, important, 4. To assign code numbers to these services so that they may be understood and intelligently handled by non-medical people and by computers, . . . " A system to do this was devised by the American Medical Association and published under the title "Current Procedural Terminology." The first edition of the book used a four digit coding system which proved not to be flexible enough to handle the varied situations found in medicine.

The OSMA resolution went on to urge all members of the state association to begin using this new five digit coding system as soon as possible.

Copies of the second edition of *Current Procedural Terminology* can be obtained from the American Medical Association, Circulation and Records Department, 535 North Dearborn Street, Chicago, Illinois 60610. □

## Partners Help Peru Earthquake Victims

Hundreds of thousands of homeless Peruvians are being helped by Oklahoma's Partners of the Alliance. This non-profit organization is gathering money, medicine, food, and clothing to send to the victims of the disastrous June earthquake.

Latest reports from the capital of Peru, Lima, indicate that the death toll now stands at over 35,000 with 105,000 persons injured and 600,000 homeless.

Oklahoma's Partners of the Alliance have teamed up with the Texas group to solicit the following items: antibiotics (any type), typhoid vaccine, portable generators, high protein food (canned milk, dehydrated eggs, etc.), water purification tablets, blankets, tents, and heavy clothing. The heavy clothing is particularly important as most of the people are in an area of 14,000 feet altitude.

Any money collected will be used to buy medical supplies at wholesale prices.

Physicians having supplies they would like to donate should contact Dee Kerns, 405 946-6411, ex. 216. □





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## Blue Plans Change Coordination of Benefits

On June 1st, 1970, Oklahoma Blue Cross and Blue Shield changed the method in which they administer their Coordination of Benefits clause in group contracts to implement more fully this provision, which has been in effect since 1968. This COB provision, more commonly known as non-duplication, is simply a contractual method of dividing liability between insurance companies, when the insured has coverage with more than one group plan, so that he is able, whenever possible, to meet his health care expenses in full—and yet not collect more than actual costs.

The ethical reason for this provision is, of course, that it is improper for a subscriber to make money on his health care. Another major reason is that both buyers of health care and the industry itself recognizes COB as an effective method of either lowering subscription charges or retarding their rate of increase.

Basically, the Plans follow a "Primary-Secondary" payment rule for group contracts. If the husband or child is the patient, the husband's plan is the primary carrier, and the wife's plan is the secondary carrier. If the wife is the patient, the wife's plan is the primary carrier, and the husband's plan is the secondary carrier. If the patient is the person in whose name both group coverages are held, the plan he has held the longer period of time is the primary carrier.

Every patient who enters the hospital with Blue Cross and Blue Shield coverage will now be required to complete a "Health Insurance Information Form." The hospital will forward this completed form to the Plans; and from the information provided, Blue Cross and Blue Shield will determine whether they are the primary or secondary carrier. If they are primary carrier, they will process and pay the claim in the regular manner as if the second coverage did not exist. If they are

secondary, they will contact the primary carrier for determination of benefits. After the amount of liability (payment) for which Blue Cross and Blue Shield are responsible has been determined, the patient and the hospital will receive a copy of a "Summary of Benefits Worksheet," indicating what benefits will be paid. Payment will be made shortly after this worksheet is received.

In order to inform the providers (hospitals) of this new implementation program, a series of hospital workshops was held during the month of May, and the various phases of this new method of administering the non-duplication provision were explained in detail. The hospitals agreed to cooperate fully with the Plans in carrying out this new procedure.

The process of educating the members was handled by mailing a brochure explaining the new method of implementing the COB program. The brochures, which were enclosed with a letter to all group leaders and then given to each member of that group by the leader, also explained that duplicate coverage, when allowed to produce profit from illness, is costly. The brochures stated, however, that duplicate coverage can be worthwhile when it is considered as an additional means to protect a member's family with paid-in-full bills.

The letter to the group leaders assured them that the new program in no way affected the current benefits under their Blue Cross and Blue Shield group contracts, and was designed merely to effect a greater savings in their dues dollar. □

## Alumni Honors Graduates



A traditional event for OU Medical School graduates is the honoring house given by the school alumni association. This year's party was held on Saturday, June 6th, at the Faculty House in Oklahoma City to honor graduating seniors, OSMA officers and other officials.

Shown sampling refreshments is Jack Juan Beller, M.D., foreground, class member from Midwest City. Doctor Beller's internship appointment is at St. Anthony Hospital, Oklahoma City. □



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# Proceedings of the 64th Annual Session of the House of Delegates of the Oklahoma State Medical Association

## OPENING SESSION

### I. CALL TO ORDER:

The House of Delegates convened its 64th Annual Session in the Skirvin Convention Center, Oklahoma City, Oklahoma on May 14th, 1970. The Speaker, Roger Reid, M.D., Ardmore, called the meeting to order at 7:15 p.m.

### II. INVOCATION:

The Reverend Doctor Paul B. McCleave, Chicago, delivered the Invocation, followed by a few minutes of silence in tribute to the late C. M. Hodgson, M.D., Kingfisher, former Speaker of the House.

### III. REPORT OF THE CREDENTIALS COMMITTEE:

The presence of a quorum was reported by C. Riley Strong, M.D., El Reno.

### IV. ANNOUNCEMENTS:

Doctor Reid announced the appointment of the following committees to assist in the conduct of the meeting:

#### *Credentials Committee*

C. Riley Strong, M.D., El Reno, Chairman

John B. Miles, M.D., Anadarko  
Yale E. Parkhurst, M.D., Norman  
Ann K. Kent, M.D., Muskogee

#### *Sergeants-at-Arms*

Frank W. Clark, M.D., Ardmore, Chairman

Paul J. Ottis, M.D., Okarche  
J. D. Powell, M.D., Poteau  
Paul H. Rempel, M.D., Enid

#### *Tellers*

Richard Burgtorf, M.D., Shattuck, Chairman

Arthur F. Elliott, M.D., Oklahoma City

David Ramsay, M.D., Ada

John X. Blender, M.D., Cherokee  
Homer D. Hardy, M.D., Tulsa

#### *Parliamentarian*

George H. Garrison, M.D., Oklahoma City

#### *Reference Committee No. I.*

Elwood Herndon, M.D., Oklahoma City, Chairman

Robert D. Grubb, M.D., Tulsa  
W. M. Leebron, M.D., Elk City  
Glen L. Berkenbile, M.D., Muskogee  
Leon D. Combs, M.D., Shawnee  
T. C. Glasscock, M.D., Ponca City  
David Carson, M.D., Fairland

Robert R. Hillis, M.D., Lawton

G. B. Gathers, M.D., Stillwater

Recording Secretary: Don Blair

#### *Reference Committee No. II.*

Harlan Thomas, M.D., Tulsa, Chairman

W. A. Matthey, M.D., Lawton

Alfred T. Baker, M.D., Durant

Robert G. White, M.D., Sapulpa

Tom S. Gafford, M.D., Muskogee

John A. McIntyre, M.D., Enid

Robert Alexander, M.D., Okmulgee

Haven Mankin, M.D., Oklahoma City

George Smith, M.D., Cushing

R. W. Goen, M.D., Tulsa

Recording Secretary: David Bickham

#### *Reference Committee No. III.*

S. N. Stone, M.D., Oklahoma City, Chairman

Marvin K. Margo, M.D., Oklahoma City

Robert K. Endres, M.D., Tulsa

Robert Anderson, M.D., Tulsa

Larry Hrdlicka, M.D., Claremore

Casper Smith, M.D., Duncan

George M. Brown, M.D., McAlester

Robert J. Hogue, M.D., Guthrie

Roy W. Anderson, M.D., Cordell

E. L. Buford, M.D., Guymon

James V. Miller, M.D., Ardmore

Recording Secretary: Ed Kelsay

#### *Reference Committee No. IV.*

Malcom E. Phelps, M.D., El Reno, Chairman

Thomas Rhea, M.D., Idabel

J. Hartwell Dunn, M.D., Oklahoma City

Charles C. Elliott, M.D., Okemah

Malcolm Mollison, M.D., Altus

W. I. Jones, M.D., Stroud

John R. Reid, M.D., Nowata

Francis R. First, M.D., Checotah

Recording Secretary: Myrna Kay Owens

### V. INTRODUCTION OF GUESTS:

Mrs. J. Hartwell Dunn, Oklahoma City, Retiring President of the Woman's Auxiliary to the Oklahoma State Medical Association; Mrs. William M. Leebron, Elk City, Incoming President of the Woman's Auxiliary to the OSMA; Mrs. Gordon Peek, Baton Rouge, President, Woman's Auxiliary to the Southern Medical Association and Mrs. John M. Chenault, Decatur, Alabama, President, Woman's Auxiliary to the American Medical Association were introduced and

brought greetings to the House of Delegates. Mrs. Leebron asked the physicians to urge their wives to join the auxiliary and give it added strength, so they could better continue in their capacity of serving the physicians.

Doctor Hillard E. Denyer, OSMA President, introduced Doctor James L. Dennis, Vice-President for Medical Center Affairs, University of Oklahoma, and presented him with an AMA-ERF check in the amount of \$10,572.

Doctor Dennis reported that he felt the funds would be used in a way most pleasing to the physicians the establishment of a student loan office. He said the money would be used to support and finance the operation of this office. This past year has been an exciting and confusing year, Doctor Dennis said, with the opening of the new Medical Basic Science building as one of the developments at the medical school. Also, the Associate Dean of Dentistry is now on campus, along with the Deans of the School of Health, School of Nursing and School of Medicine.

He noted that Doctor Robert Bird will succeed him in July as Dean of the School of Medicine (academic).

In closing, Doctor Dennis said that he had appeared before the Delegates for six years, and since this might be his last appearance before them, he thanked the Delegates for their support and their loyalty.

Dale Groom, M.D., Director of the Oklahoma Regional Medical Program, brought greetings to the Delegates and gave a short resume of some of the health programs and accomplishments in Oklahoma brought about by ORMP. He told of the primary goal of ORMP being to improve medical care in Oklahoma by making the latest advances in medical research more readily available throughout the state. He told the physicians they could help by taking office on the advisory board; providing nominations for the advisory board and committees; in the consumation of projects and taking part in continuing education. He spoke of

(Continued on Page 316)



## Donahue Named Mental Health Director

Hayden H. Donahue, M.D., has been named State Director of Mental Health. He became Acting Director in March of this year following the resignation of Albert J. Glass, M.D., who joined the Walter Reed Institute of Research in Maryland.

Donahue has been Superintendent of Central State Hospital, Norman, for several years and will continue in this role. He served as Mental Health Director from 1952 until 1959 and has served as Acting Director at different times.

The announcement of the permanent appointment as director was made by Charles E. Smith, M.D., Chairman of the State Mental Health Board. Smith described Donahue as "one of the nation's leading psychiatrists and hospital administrators."

The board chairman stated that the board had discussed the appointment with members of the House and Senate as well as the Governor before taking action. They also named Ernest E. Shadid, M.D., of Central State Hospital as assistant director to Doctor Donahue. □

## Prototype Surgical Residency Approved For Tulsa

A General Surgical Residency Program has recently been approved for Tulsa by the Conference Committee on Graduate Education in Surgery representing the American Board of Surgery, American College of Surgeons, and the American Medical Association, on a provisional basis, according to Doctor Joe L. Spann, Tulsa surgeon and director of the Tulsa Area Cancer Control Project of the Oklahoma Regional Medical Program.

The prototype cooperative arrangement, established by the Tulsa Surgical Trust and the Oklahoma Regional Medical Program, will include Hillcrest Medical Center, St. Francis Hospital, and St. John's Hospital for four years of training of house staff and continuing education for staff physicians. With the exception

of the University of Oklahoma Medical Center, this is the only other established Type I General Surgery Residency within the state of Oklahoma, Doctor Spann said.

The number of residents appointed will be limited to 15, six in the first year and three in each of the other years, who will rotate assignments through three hospitals.

"The primary objective of the Residency program is to improve continuing education for practicing physicians as well as upgrading the graduate education of the house staff," Dr. Spann said. "It is recognized that the intent of this program will be achieved only by the continued implementation of the purpose as they relate to cancer education, both graduate and postgraduate, and extend throughout the region and sub-region." □

## OU Library Contains Rare Medical Books

A collection of rare medical books dating back to the 16th century is competing for space in the University of Oklahoma Medical Center Library with a forward-looking program of state-wide dissemination of information to health workers.

Librarian Leonard M. Eddy has the problem of finding room to preserve priceless old volumes while providing for new materials and services for giving health professionals over the state quick access to the latest information on treating the sick.

The state's health sciences library, located in a portion of the first floor and basement of the Medical School Building, has experienced a phenomenal growth in its collections and services in the past ten years, but without any increase in space.

There is no suitable space to display such books as "Method of Treatments for all Diseases of the Human Body, in Three Separate Books," by Gulielmus Rondeletti, published in Latin in 1575.

Rarest of the antique volumes is William Hunter's "The Anatomy of the Human Gravid Uterus," one of the most noted publications in the specialty of gynecology and obstetrics. The huge volume, with detailed

plates of the uterus, was acquired from Johns Hopkins University, Eddy said.

Much of the collection must be stored in metal cases in the library basement and the volumes cannot be properly preserved. Many of the covers, bound in vellum or other leathers, are wrinkled and withered.

"We are very proud of these valuable volumes," said Doctor James L. Dennis, OU Vice president for Medical Center affairs. "It is too bad we do not have space to display them so that they can be appreciated."

Other prize volumes include: "A Case of Hydrophobia, Commonly Called Canine Madness, From the Bite of a Mad Dog, Successfully Treated," written in 1793 by Thomas Arnold, M.D.; "Essay on Man and on the Development of the Fetus," by Rene Descartes, published in 1677; "History of the Great Plague in London in the Year of 1655," whose author was a citizen later found to be Daniel DeFoe, author of "Robinson Crusoe."

"We are trying to hang on to history as well as keep abreast of all the new medical and scientific knowledge developing with constant new discoveries and research," Eddy said.

The library serves not only the entire Medical Center community, with faculty and students from five professional schools and many paramedical training programs, but also provides reference and information services for the entire state through the Regional Library Project of the Oklahoma Regional Medical Program.

Established in 1928 when the present four-year Medical School was built, the library at present has a staff of seven professional librarians and ten non-professional staff members.

Growth of the Medical Center and other areas the library serves has brought the need for additional space for users, collections, and work and storage areas, Eddy said.

A new \$4 million Health Science Library and Information Center has been designed and planned as a key element in the integrated and com-



prehensive Oklahoma Health Center, a ten-year expansion and development plan.

The plans call for a five-level building to serve all public and private facilities to be included in the 250-acre multi-disciplined health complex, as well as the Medical School which is the nerve center of medical education and practice in Oklahoma.

It will provide for dissemination of information through a computer and elaborate audio-visual system for those engaged in health professions throughout the state, since it is the only major medical health sciences library in Oklahoma.

Acquisition of state and federal funds as well as gifts from local

donors and foundations are actively being sought to provide for construction of the building, Eddy said.

Under the new Regional Library Project, photocopies of relevant medical information from the 80,000 volume library will be mailed upon request to health professionals throughout the State, Eddy said.

The Library's collections are strong in all areas of medicine. In addition to the 80,000 volumes, 1,715 journals are received currently. Multi-media learning materials and audio-tapes series are being increased and a collection of some 1,200 teaching slides are circulated with considerable success. □

## BOOK REVIEWS

**BENIGN DISEASES OF THE VULVA AND THE VAGINA.** By Herman L. Gardner, M.D., and Raymond H. Kaufman, M.D. 359 pp., illustrations. St. Louis: The C. V. Mosby Co., 1969. \$23.50.

This book serves as a comprehensive abstract of our present knowledge on the subject, Benign Diseases of the Vulva and the Vagina.

As stated by the authors, "Several conditions are discussed that should have been omitted, while others have been omitted that probably should have been included." However, it is difficult and unfair to attempt to pick out the most illuminating and interesting presentations, as this depends upon the training and bias of the reader and his chief interests.

New discoveries from research and highly specialized diagnostic devices call for reconsideration of conventional bedside diagnostic techniques and basic theories of disease. The authors show what a remarkably precise diagnosis can emerge from the use of a complete history, physical examination and minimal laboratory procedures. Importance of understanding and reviewing the embryology, histology, anatomy and physiology of the vulva and the vagina is emphasized in the structure of the text.

Concise written, illustrated simply to convey meaning at a glance, this text can be read quickly and easily and the material presented is within the general scope encountered by clinicians throughout the world.

This book definitely belongs in the library of every clinician providing health care to women.—A. J. McMaster, M.D.

**CRISIS FLEETING.** Compiled and edited by Professor James H. Stone, Department of Humanities, San Francisco State College, California, formerly Medical Service Corps, W.W. II. 396 pp., Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office. Library of Congress Catalog #: 76-600575; 1969. \$3.75.

Five highly personalized, subjective, original reports have been edited and combined by Professor Stone to forthrightly and candidly report the experiences of the many dedicated medical personnel who served in India and Burma during the Second World War.

The **North Tirap Log**, a daily diary by Mr. (then Sergeant) R. M. Fromant is a poignant account of the establishment of a small aid station on a little used jungle trail between Ledo, Assam Province, In-

dia and the Hukawng Valley, Burma. To the student of jungle medicine this segment will be a bore. To the student of humanities it will be a simple but vivid portrayal of the struggle of a handful of citizen-medics against the vicissitudes of rain, inadequate rations, heat, inactivity and lack of comprehension of their role in the "big picture."

**Chinese Liaison Detail** is the account of Walter S. Jones, M.D., (then Major), a gynecologist struggling with problems of camp sanitation and hygiene during a seven month assignment as medical liaison with the 10th Chinese Engineers who were building the Ledo Road. He had the unique and dubious distinction of being the first American officer to contract scrub typhus in Burma. Little was known then concerning "mite typhus," and Doctor Jones' remarkable and unique scientific account of the disease from the victim's vantage point deserves a place among the classics of medical literature.

**The Tamraz Diary** is a meticulous, oftentimes terse report of John M. Tamraz, Colonel, Medical Corps, U.S. Army—the Regular Army—on the medical activities of a major combat theatre. Doctor Tamraz, Services of Supply Surgeon, was the Chief Administrator of all medical activities in the CBI and his diary reflects, for the most part, the dignified and circumspect utterances of the institution rather than the man. It also reflects the frustrations and sketchy planning which characterized the 1943-1944 CBI Theatre—a "low priority" operation in the "big picture." The diary deals specifically with medical support provided to the builders of the Ledo Road.

**With Wingate's Chindits** is the final report of Major General W. J. Officer, then Director of Medical Services, Hq., Far East Land Forces, concerning the British Special Force which fought behind enemy lines in North Burma in 1944. It presents, from a senior medical officer's viewpoint, the influence of sickness and extended debility on the combat effectiveness of troops committed to extended periods of jungle warfare. Malaria, dysentery, typhus, sanita-



tion, air evacuation and nutrition are discussed in reference to their impact on the success of the Special Force's mission. The ultimate disengagement and withdrawal of the Chindits was dictated by their physical disability.

**The Marauders and the Microbes** is a composite of the reports of two physicians, Doctor James E. T. Hopkins and Doctor Henry G. Stelling (then Captains, M.C.), on the strenuous four months of continuous jungle warfare conducted by "Merrill's Marauders," February-June, 1944. Their report constitutes a medical explanation for the virtually complete physical collapse of the Marauders as an effective combat force and of those 50 percent who survived the campaigns. Environmental deprivation, tactical misfortune and medical demolition proved to be in-

juries fatal to the unit. Insects, parasites, polluted water, rain-soaked clothing which never dried, all combined—more effectively than the enemy—to rob the Marauders of their initial toughness, esprit de corps and combat effectiveness. Malaria, dysentery, dengue fever, neuropsychiatric disorders, scrub typhus, "jungle rot"—these were the more formidable enemy.

To those potential readers who remember, first hand, the Pacific-CBI Campaigns of so many years ago, this book is recommended. To those who face the dubious privilege of future involvement in Southeast Asia, it is probably an excellent medical primer—as suggested by the Surgeon General, U.S. Army in his foreword—although medical science has progressed far since these authors documented their experiences. —Mr. Neal Hardin, Jr., *University Medical Center, Oklahoma City, Oklahoma.*

**OPEN WIDER, PLEASE: THE STORY OF DENTISTRY IN OKLAHOMA**, by J. Stanley Clark. 391 pp., University of Oklahoma Press. \$7.50.

During the last part of the nineteenth century and the first years of the twentieth, when the Oklahoma lands were being opened to white settlement, dentistry was emerging from a trade into a profession. Thus the professional growth of the dental practitioners paralleled the advancement of Oklahoma from territorial status through statehood and development as a progressive state. Neither advance came naturally—only men looking to the future made both possible; and it was from the men who made the transition that J. Stanley Clark gathered the information for this interesting account. An Oklahoma dental college has been a dream of Oklahoma dentists since before statehood; perhaps at last it will be realized. □

## Miscellaneous Advertisements

**FOR SALE:** IBM executive typewriter (electric, 10 months old); two ear treatment cabinets with pump; Castle Autoclave sterilizer, #777, with two syringe holders; two metal eye treatment cabinets; two B & L Gonioprisms; one American Optical Refracting Chair (Deluxe); one American Optical Giantscope, Vista Dial; one Belton Audiometer (Model 14A); several hundred eye instruments, some new; and several hundred ear, nose and throat instruments. Contact Mrs. J. H. Abernethy, 1606 North Hudson, Altus Oklahoma 73521.

**WILL SELL OR LEASE** my clinic building and practice, located in the heart of the hospital zone in Oklahoma City. Large enough for two or three doctors. Excellent practice, limited only by your ability and desire to work. Contact Key B, The Journal of the Oklahoma State Medical Association, 601 N.W. Expressway, Oklahoma City 73118.

**WANTED: THREE PHYSICIANS:** One internist, board certified or board eligible for full-time assignment to Medical Service: One generalist for assignment to Outpatient Service duties; 390-bed general medical and surgical hospital; beginning salary \$18,531 to \$25,189 PA depending upon qualifications; approximately 20 percent additional fringe benefits including annual and sick leave; insurance and retirement plan. Non-discrimination in employment. Location is a superlative outdoor recreation area. Contact Chief of Staff, Veterans Administration Hospital, Muskogee, Oklahoma.

**GROUP PRACTICE** opportunities for general surgeon with thoracic and vascular training, and urologist. Established practice, generous fringe benefits, and a comfortable community. Write or call collect Charles R. Gibson, M.D., or R. G. Stoll, M.D., Chickasha Clinic, Inc., P.O. Box 1069, Chickasha, Oklahoma 73018. Inquiries kept confidential.

**EXCELLENT OPPORTUNITY** for ophthalmologist in Altus, Oklahoma. No other ophthalmologist within area. Lucrative practice. Approximately 30,000 population in agricultural vicinity. Air Force Base. Contact Willard D. Holt, M.D., 205 West Cypress, Altus, Oklahoma.

**GROUP PRACTICE** opportunities for urologist. Established practice, generous fringe benefits, and a comfortable community. Write or call collect: Chickasha Clinic, Inc. P.O. Box 73018. Inquiries kept confidential.

**FAMILY DOCTOR**, surgeon, internist. Under 40. \$36,000 salary, option thereafter. Spacious new clinic. Near lake. Contact R. G. Bissell, M.D., Pryor, Oklahoma. 918 825-2420.

**E.N.T. or OPHTHALMOLOGIST.** Newly finished office space in the Great Plains Medical Square, Lawton, Oklahoma. Contact Roger Harrison, 1300 McGee, Norman, Oklahoma. Phone 329-4211. □



STANDARD CLAIM FORM

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION AND THE ASSOCIATION OF HEALTH AND ACCIDENT INSURORS OF

INSURANCE COMPANY ADDRESS

TO:

ATTENDING PHYSICIAN'S REPORT

1 PATIENT'S NAME 2. ADDRESS

4 DIAGNOSIS (EXPLAIN COMPLICATIONS)

5 ADDITIONAL DIAGNOSES (CHRONIC DISEASE OF DEFECT FOUND DURING PRE

6 DATE OF ONSET 7 DATE FIRST CONSULTED 8. DUE TO PREGNANCY  
☐ YES ☐

11 SURGICAL OR OBSTETRICAL PROCEDURES (DESCRIBE)

12. IF HOSPITALIZED. NAME AND ADDRESS OF

15 NAME AND ADDRESS OF OTHER

COMPLETE IF PATIENT

16 TOTAL DISAP

FROM

17 P

PLEASE ATTACH TO COMPLETED INSURANCE CLAIM FORM

STANDARD  
INSURANCE  
REPORTING FORMS  
For Oklahoma Physicians

STATEMENT FOR PROFESSIONAL SERVICES RENDERED

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION

PHYSICIAN'S NAME

PATIENT'S NAME

ADDRESS

COMPLETE FOR MEDICAL CARE ONLY: AT HOSPITAL, HOME, OR OFFICE  
GIVE THE DATES OF TREATMENT BY INSERTING MONTH AND YEAR. INDICATE EACH  
H—HOSPITAL V—HOME O—OFFICE OR CLINIC

MONTH AND YEAR												
	1	2	3	4	5	6	7	8	9	10	11	12

PLEASE STATE YEAR

HOSPITAL

Form 102  
STATEMENT FOR  
PROFESSIONAL SERVICES  
RENDERED

1 Pad . . . . \$ .80  
(50 Forms)  
3 Pads . . . . 2.25  
(150 Forms)  
6 Pads . . . . 4.35  
(300 Forms)  
12 Pads . . . . 7.70  
(600 Forms)

Plus Oklahoma Sales Tax. Remit with order and postage will be paid.

Form 101  
STANDARD CLAIM FORM

1 Pad . . . . \$ .70  
(50 Forms)  
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(150 Forms)  
6 Pads . . . . 3.75  
(300 Forms)  
12 Pads . . . . 6.60  
(600 Forms)

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FORM 101 Pads  
FORM 102 Pads

☐ Check Enclosed  
Amount  
☐ Bill Me

ORDER FORM

Enter our order as listed on the left and  
ship to the address below.

Signature

Address

City

OSMA  
APPROVED

Prepared by the Insurance Commit-  
tee of the Oklahoma State Medical  
Association these forms are designed  
to simplify this tedious office proced-  
ure. FORM 101, Standard Claim  
Form and FORM 102 Statement for  
Professional Services Rendered are  
available immediately in pads of 50.  
See price list below and order now  
. . . use the handy order form.



## Proceedings

(Continued from Page 311)

such projects as the Program to Improve Library and Information Services, Tulsa Tumor Registry Project, courses and workshops on diabetes held throughout the state, and two diagnostic projects. He urged them to take leadership on a local level by participating in the ways mentioned.

He thanked the physicians for their hospitality during his one and a half years with ORMP.

Paul D. Erwin, M.D., Annual Meeting Chairman, spoke briefly about some of the changes of this year's annual meeting. Changing the time of the House of Delegates, he felt, was a change for the better. However, he pointed out, it was not a permanent change. He spoke of the nominal registration fee, and the fact that increasing costs and decreasing exhibits had brought this about.

William L. Parry, M.D., Program Chairman, praised the new format built around six system session programs. He felt that physicians would benefit from this format and beneficial dialogue could be entered into via the panel discussions, and too, that really top flight speakers could be induced to come for this type of engagement.

Doctor E. Edwin Fair, Chairman of the OSMA Medicine and Religion Committee introduced Doctor Paul McCleave, Director of the AMA's Department of Medicine and Religion. The AMA Committee was established in 1961, Doctor McCleave said, with its purpose being to bring clergy and physicians together into a better understanding of their role in handling the physical, spiritual and emotional needs of a patient. He urged county societies to establish clergy-physician seminars to acquaint themselves with each other and also their abilities, so total patient care would evolve. He stated that there are simply times when more than a tranquilizer is needed.

Mrs. M. C. Bretz, President of the Oklahoma Association of Medical Assistants brought greetings to the Delegates from her 206-member organization. It was pointed out by Doctor Reid that the Medical Assistants would be serving coffee Satur-

day morning for the House of Delegates meeting.

Joe Fagan, President of the University of Oklahoma Chapter of the Student AMA, was introduced. He called for more communication between teachers and students. He expressed his feeling that too many medical societies had abdicated their responsibility to society, and he observed that this was a luxury they could ill afford. He also stated that the OSMA should take a positive stand on problems in medicine, and extended an invitation to the group to become activists. Medicine, he said has somewhat decided that it can ride the storm out, but he felt that wouldn't happen.

He asked the Delegates to consider one request from SAMA—that they be granted some form of representation in the House of Delegates so a dialogue might be established between students and physicians. Through this dialogue, he felt that barriers would evaporate quite rapidly.

Doctor Lawson Hardie, professional representative for the Aetna Medicare Claim Administration was introduced.

### VI. REMARKS OF THE SPEAKER:

Doctor Reid discussed the honor system concerning the \$5 registration fee, stating that Delegates who planned to attend scientific sessions were required to pay. Attendance at the reference committee meetings and scientific meetings was urged by the Speaker.

Doctor Reid announced the 1971 annual meeting would be held in Tulsa April 29-May 1, in the Tulsa Assembly Center.

### VII. APPROVAL OF THE MINUTES

The Speaker asked the pleasure of the House regarding the reading of the minutes of the last annual meeting.

*Doctor Robert Hogue moved to dispense with reading the minutes and that they be approved as published in the Journal of the Oklahoma State Medical Association. The motion was seconded and carried.*

### VIII. RECESS FOR CAUCUS OF TRUSTEE DISTRICTS

Doctor Reid announced the House would recess for ten minutes to allow Trustee Districts I, II, III, IV, V and VIII to caucus.

### IX. NOMINATIONS OF OFFICERS

The House was declared open for the nominations for the position of

President-Elect (One-year term of office).

*Lucien M. Pascucci, M.D., Tulsa,* was nominated by Duane E. Brothers, M.D., Tulsa.

*Edward K. Norfleet, M.D., Tulsa,* was nominated by Jerold D. Kethley, M.D., Shawnee.

Nominations were declared open for the position of Vice-president (One-year term of office).

*Marvin K. Margo, M.D., Oklahoma City,* was nominated by Rex E. Kenyon, M.D., Oklahoma City.

Nominations were declared closed.

Nominations were declared open for the position of Secretary-Treasurer (Two-year term of office).

*Stanley R. McCampbell, M.D., Oklahoma City,* was nominated by Arnold G. Nelson, M.D., Oklahoma City.

Nominations were declared closed.

Nominations were declared open for the position of Speaker of the House (Two-year term of office).

*Roger Reid, M.D., Ardmore,* was nominated by Orange M. Welborn, M.D., Ada.

Nominations were declared closed.

Nominations were declared open for the position of Vice-Speaker (Two year term of office).

*Samuel N. Stone, M.D., Oklahoma City,* was nominated by Arnold G. Nelson, M.D., Oklahoma City.

Nominations were declared closed.

Nominations were declared open for the position of Delegate to the American Medical Association (Position I, two-year term of office).

*Francis A. Davis, M.D., Shawnee,* was nominated by Leon D. Combs, M.D., Shawnee.

*Scott Hendren, M.D., Oklahoma City,* was nominated by Arnold G. Nelson, M.D., Oklahoma City.

Nominations were declared closed.

Nominations were declared open for the position of Alternate Delegate to the American Medical Association (Position I, two-year term of office).

*Rex E. Kenyon, M.D., Oklahoma City,* was nominated by J. B. Eskridge, III, M.D., Oklahoma City.

Nominations were declared closed.

Nominations were declared open for the position of Delegate to The American Medical Association (Position II, two-year term of office).

*Harlan Thomas, M.D., Tulsa,* was nominated by Duane E. Brothers, M.D., Tulsa.

Nominations were declared closed.



Nominations were declared open for the position of Alternate Delegate to the American Medical Association, (Position II, two-year term of office).

*Orange M. Welborn, M.D.*, Ada, was nominated by Frank Clark, M.D., Ardmore.

Nominations were declared closed.  
**X. NOMINATIONS OF TRUSTEES AND ALTERNATE TRUSTEES:**

Nominations were declared open for Trustee and Alternate Trustee for the following Trustee District (three-year term of office):

**DISTRICT I:**

Reporting on the caucus of representatives from District I, Doctor Elvin Amen made the following nominations:

*Jess D. Green, M.D.*, Bartlesville, was nominated for the position of Trustee and *Edward W. Allensworth, M.D.*, Vinita, was nominated for the position of Alternate Trustee.

**DISTRICT II:**

*G. B. Gathers, M.D.*, Stillwater, nominated *James A. Webb, M.D.*, Ponca City, for the position of Trustee and *Thomas C. Glasscock, M.D.*, Ponca City, for the position of Alternate Trustee.

**DISTRICT III:**

Mark D. Holcomb, M.D., Enid, nominated *John A. McIntyre, M.D.*, Enid, for the position of Trustee and *Robert J. Hogue, M.D.*, Guthrie, for the position of Alternate Trustee.

**DISTRICT IV:**

*M. K. Braly, M.D.*, Woodward, nominated *John X. Blender, M.D.*, Cherokee, for the position of Trustee and *Richard H. Burgtorf, M.D.*, Shattuck, for the position of Alternate Trustee.

**DISTRICT V:**

*Francis W. Hollingsworth, M.D.*, El Reno, nominated *C. Riley Strong, M.D.*, El Reno, for the position of Trustee and *Ross Deputy, M.D.*, Clinton, for the position of Alternate Trustee.

**DISTRICT VIII:**

*Duane Brothers, M.D.*, Tulsa, nominated *Myra A. Peters, M.D.*, Tulsa, to fill the balance of the unexpired term (one-year) as Alternate Trustee.

The Speaker declared all nominations closed.

**XI. REPORT OF THE PRESIDENT:**

Doctor Hillard E. Denyer, gave his report and it was referred to Reference Committee No. I. (A copy of

the report is attached and made a part of the minutes.)

**XII. REPORT FROM THE BOARD OF TRUSTEES:**

Since the Board of Trustees Report is included in the Delegates' portfolios, Doctor C. Riley Strong, Chairman of the Board, read only the Board's Supplemental Report. Both reports were referred to Reference Committee No. 1 (Copies of the reports are attached and made a part of the minutes).

**XIII. REPORT OF THE SECRETARY-TREASURER:**

Doctor Stanley R. McCampbell-Secretary-Treasurer, reviewed his report and it was referred to Reference Committee No. I.

**XIV. COUNCIL AND COMMITTEE REPORTS:**

The Speaker stated that the House of Delegates received the following reports and they are referred to the designated reference committees (Copies of the reports are attached and made a part of the minutes.)

*Committee on Planning*, Scott Hendren, M.D., Chairman, referred to Reference Committee No. I.

*Annual Meeting Committee*, Paul D. Erwin, M.D., Chairman, referred to Reference Committee No. I.

*Financial Aid to Education Committee*, Scott Hendren, M.D., Chairman, referred to Reference Committee No. I.

*Medical School Liaison Committee*, C. Riley Strong, M.D., Chairman, referred to Reference Committee No. I. (A supplemental report was read by the Chairman.)

*Council on Insurance*, C. E. Woodward, M.D., Chairman, referred to Reference Committee No. I.

*Council on Professional Education*, Irwin H. Brown, M.D., Chairman, referred to Reference Committee No. 1.

*Council on Professional and Inter-vocational Relations*, Orange M. Welborn, M.D., Chairman, referred to Reference Committee No. II.

*Council on Public Health*, Hayden H. Donahue, M.D., Chairman, referred to Reference Committee No. IV.

*Council on Public Policy*, Rex E. Kenyon, M.D., Chairman, referred to Reference Committee No. II.

*Council on Socio-Economic Activities*, B. C. Chatham, M.D., Chairman, referred to Reference Committee No. III.

*Report of the Constitution and By-laws Committee*, George H. Garrison, M.D., Chairman, referred to Refer-

ence Committee No. IV.

*Report of the Rural Medical Council*, William C. McCurdy, Jr., M.D., Chairman, referred to Reference Committee No. IV.

**XV. INTRODUCTION OF RESOLUTIONS**

The Speaker announced that Resolutions Numbers 1 through 19 would be introduced by "Title" and "Resolve," referred to the appropriate Reference Committees and acted upon in the Closing Session of the House of Delegates:

*Resolution No. 1*, entitled "AMA Postgraduate Education Program" was introduced by Jack W. Parrish, M.D., Seminole, and referred to Reference Committee No. I.

*Resolution No. 2*, entitled "Title XIX Agreement" was introduced by Jack W. Parrish, M.D., Seminole, representing two county societies and 26 physicians, was referred to Reference Committee No. III.

*Resolution No. 3*, entitled "Extension of Junior Membership to Hospital Residents" was read by Duane Brothers, M.D., Tulsa, on behalf of the Tulsa County Delegation, and referred to Reference Committee No. I.

*Resolution No. 4*, entitled "Ethical Non-Compliance With Onerous Government Regulations" was read by Paul Ottis, M.D., Okarche, on behalf of the Kingfisher County Society and referred to Reference Committee No. III.

*Resolution No. 5*, entitled "Revocation of UCR Endorsement" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. III.

*Resolution No. 6*, entitled "Resignation of Officers from Blue Shield Board" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. III.

*Resolution No. 7*, entitled "Basement Area" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. I.

*Resolution No. 8*, entitled "Himler Report" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. I.

*Resolution No. 9*, entitled "Annual Meeting Registration Fee" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. I.

*Resolution No. 10*, entitled "Oklahoma Regional Medical Program" was



read by Doctor Reid, representing the Board of Trustees, and was referred to Reference Committee No. I.

*Resolution No. 11*, entitled "In Appreciation of Armais Arutunoff" was introduced by Hillard E. Denyer, M.D., Bartlesville, and referred to Reference Committee No. I.

*Resolution No. 12*, entitled "Liaison With Blue Shield" was introduced by Edward K. Norfleet, M.D., Tulsa, and referred to Reference Committee No. III.

*Resolution No. 13*, entitled "Oral Contraceptive Leaflet" was read by J. B. Eskridge, III, M.D., representing the Oklahoma County Medical Society, and referred to Reference Committee No. IV.

*Resolution No. 14*, entitled "Title XIX Agreement" was read by J. B. Eskridge, III, M.D., representing the Oklahoma County Medical Society, and referred to Reference Committee No. III.

*Resolution No. 15*, entitled "Current Procedural Terminology, 2nd Edition" was read by J. B. Eskridge, III, M.D., representing the Oklahoma County Medical Society, and referred to Reference Committee No. III.

*Resolution No. 16*, entitled "Endorsement of Indemnity Principle in Health Care Contracts," was introduced by co-author Jack L. Richardson, M.D., Tulsa, and referred to Reference Committee No. III.

*Resolution No. 17*, entitled "Adoption of Policy Opposing Favoritism, Partiality or Preference of Third Parties" was read by co-author Jack L. Richardson, M.D., Tulsa, and referred to Reference Committee No. III.

*Resolution No. 18*, entitled "Council of Medical Staffs," was introduced by M. Joe Crosthwait, M.D., Oklahoma City, and referred to Reference Committee No. II.

*Resolution No. 19*, entitled "Medical Insurance Review" was introduced by Robert J. Hogue, M.D., Guthrie, and referred to Reference Committee No. III.

(At this juncture, Doctor Richard W. Loy, Pawhuska, expressed criticism of the OSMA Group Term Life Insurance Program.)

#### *Reference Committee Meetings:*

The Speaker urged all members of the OSMA to attend the Reference Committee Hearings, and announced

the following meeting areas in the Park Avenue Suite of the Skirvin Tower Hotel:

Reference Committee No. I—Lexington Room

Reference Committee No. II—Sutton Room

Reference Committee No. III—Gold Room

Reference Committee No. IV—Madison Room

He said the meetings would begin at 9:00 a.m., May 15th.

#### **XVI. NECROLOGY REPORT**

The Speaker called on George H. Garrison, M.D., to read the Necrology Report. (A copy of the report is attached and made a part of the minutes.)

#### **XVII. ADJOURNMENT OF OPENING SESSION**

The Opening Session of the House of Delegates was adjourned at 10:00 p.m. The delegates were urged to remain to view the Blue Shield film on drug abuse, presented by Johnny Cherblanc, Blue Shield Public Relations Director.

#### **CLOSING SESSION**

May 16, 1970

#### **I. CALL TO ORDER:**

The Closing Session of the 64th Annual Meeting of the House of Delegates was called to order by the Speaker, Roger Reid, M.D., at 9:15 a.m., May 16, 1970, in the Convention Center of the Skirvin Hotel, Oklahoma City, Oklahoma.

#### **II. REPORT OF THE CREDENTIALS COMMITTEE:**

C. Riley Strong, M.D., Chairman of the Credentials Committee, announced a quorum present.

After a quorum had been ascertained the room was darkened, and a film on the OSMA's rubella campaign was shown. After the completion of the film Doctor Denyer presented Doctor Armond Start with the Robins' Community Service Award for his outstanding service as Chairman of the "Rub Out Rubella" Campaign. Doctor Denyer commended Doctor Start for his confidence in the project and for his leadership in carrying out the project so successfully.

A letter from President Nixon, dated April 24, 1970, commending the physicians of Oklahoma was also presented to Doctor Start by Doctor Denyer.

Doctor Denyer noted that commemorative engraved plaques of the

original letter from President Nixon would be given to those organizations who helped make the rubella campaign a success.

In receiving the letter from President Nixon, Doctor Start stated he felt it belonged to a large number of people, and expressed his desire to have it displayed in the headquarters of the OSMA.

#### **IV. REPORTS OF REFERENCE COMMITTEES:**

*All reports considered by the House of Delegates are attached as approved and made a part of these minutes.*

#### **REPORT OF REFERENCE COMMITTEE NO. I.**

Presented by: Elwood Herndon, M.D., Oklahoma City, Chairman.

*"Mr. Speaker and Members of the House of Delegates your reference committee gave careful consideration to the items referred to it and makes the following report:"*

##### *Item I. President's Report.*

*"Your committee recommends the approval of this report.*

*"Mr. Speaker, I move the adoption of this portion of the report."*

*The motion was seconded and carried.*

##### *Item II. Report of the Secretary-Treasurer.*

*"Your committee recommends approval of this report in its entirety.*

*"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.*

##### *Item III. Board of Trustees Annual Report and the Board's Supplemental Report.*

*"Your committee recommends approval of these reports with the exception of paragraph II in the supplemental report as noted below (Item IV).*

*"Mr. Speaker, I move the adoption of this report." The motion was seconded and carried.*

##### *Item IV. Report of the Medical School Liaison Committee and its Supplemental Report.*

*"Your committee recommends the adoption of the committee report, but further recommends that the supplemental report be referred as information to the incoming Medical School Liaison Committee since time did not permit its consideration by the committee as a whole.*

*"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.*



Item V. Resolution No. 11

"The committee supports the intent of the resolution, and as a matter of implementation, recommends that an appropriate Certificate of Appreciation be prepared and issued to Mr. Arutunoff in the name of the House of Delegates of the Oklahoma State Medical Association.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item VI. Resolution No. 10.

"The committee recommends approval of this resolution.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item VII. Resolution No. 9.

"The committee recommends disapproval of this resolution."

The Speaker recognized Edward K. Norfleet, M.D., who spoke for the resolution. Doctor Norfleet referred to Chapter X, Section 2.01 of the OSMA Constitution and Bylaws where it states that the Annual Meeting Committee shall observe the annual meeting budget as prepared by the Board of Trustees and approved by the House of Delegates. Doctor Norfleet declared that fee assessments and dues are within the authority of the House of Delegates and said the House was abdicating its responsibility if it let the registration fee stand in contradiction to the bylaws.

After some discussion from the floor concerning the registration fee, Doctor George Garrison, Chairman of the Constitution and Bylaws Committee, was recognized and stated that in Chapter V, Section 6.00 of the bylaws it reads in part "The Board of Trustees may exercise legislative powers normally conferred upon the House, provided that no action may be taken which is contrary to a general or specific policy prescribed by the House of Delegates." Therefore, Doctor Garrison said, the Board of Trustees does have the power, as long as it is not contrary to House of Delegates' policy.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item VIII. Resolution No. 3 and Report of the Constitution and Bylaws Committee.

"These items relate to the same subject. The committee recommends approval of both.

"Mr. Speaker, I move the adoption of this portion of the report." The

motion was seconded and carried.

Item IX. Resolution No. 1

"Since the resolution needs to be altered in format for presentation to the American Medical Association, as its author apparently desires, your committee recommends the approval of the following substitute resolution:

"WHEREAS, the American Medical Association has established a Voluntary Postgraduate Educational Award; and

"WHEREAS, the AMA has agreed to recognize the longstanding recertification postgraduate education program of the American Academy of General Practice in respect to qualifying for its award; and

"WHEREAS, the AAGP and its state affiliates desires that their policy to recertify members on the basis of meeting educational requirements should be accepted by the AMA without the burden of providing each member with a record of his postgraduate hours;

"NOW, THEREFORE, BE IT RESOLVED, that the AMA take the initiative to establish liaison with the American Academy of General Practice to develop appropriate procedures to coordinate the work of the two associations in an equitable manner which will relieve the administrative problems of the AAGP and its affiliates.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item IX. Council on Professional Education.

"The Committee recommends approval of this report.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item X. Report of the Annual Meeting Committee.

"The committee wishes to compliment the Annual Meeting Committee for its outstanding work, and not only recommends approval of the report but also recommends that comparable annual meetings be carried out in future years.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item XI. Resolution No. 7.

"The committee recommends disapproval of this resolution."

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item XII. Report of the Financial Aid

to Education Committee.

"The committee recommends approval of this report.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item XIII. Report of the Committee on Planning.

"The committee recommends approval of this report including the attached resolution to the American Medical Association relating to the report of the AMA Committee on Planning and Development. Further, the committee recommends that this House of Delegates officially go on record as being opposed to the AMA report in its present form.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item XIV. Resolution No. 8.

"Because of the action recommended in the preceding paragraph your committee recommends that no action be taken on Resolution No. 8. However, the committee commends the author for his position on this controversial matter.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of this report as a whole." The motion was seconded and carried.

REPORT OF REFERENCE COMMITTEE NO. II.

Presented by: John McIntyre, M.D., Tulsa, representing Harlan Thomas, M.D., Tulsa, Chairman.

"Mr. Speaker and Members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:"

Item I. Resolution No. 18.

"Your committee recommends that the resolution be changed as follows:

" 'NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association go on record as approving the concept of this organization, and refer it to the Board of Trustees of the Oklahoma State Medical Association for study and recommendation.'

"Mr. Speaker, I move the adoption of this portion of the report, as amended." The motion was seconded and carried.

Item II. Report of the Council on Public Policy.

Section I. The Council

"Your committee recommends approval of this section of the report



with the following recommendation:

"That a budgetary item of \$1,500 be allocated yearly for the Congressional Delegation's trip to Washington.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section II. Medical Heritage Committee.

"Your committee recommends approval of this section of the report.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section III. Public Relations Committee.

"Your committee recommends approval of this section of the report.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section IV. Committee on Laboratory Quality.

"Your committee recommends approval of this portion of the report, and commends this committee for their outstanding work.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section V. State Legislative Committee

"Your committee recommends the approval of this section of the report with the following amendment:

"On page 19, amend Recommendation No. 2 as follows:

Strike the period after OSMA and add the following:

"In accordance with the policies set by the Board of Trustees and the House of Delegates."

"Further, the Committee recommended that the county societies give this committee more support at the grass-roots level.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of the report of the Council on Public Policy as amended." The motion was seconded and carried.

Item III. Report of the Council on Professional and Intervocational Relations.

Section I. The Council.

"Your committee recommends approval of this section of the report.

"Mr. Speaker, I move the adoption of this portion of the report." The

motion was seconded and carried.

Section II. Cults and Quackery Committee.

"Your committee recommends approval of this section with the following amendment:

"On page 6, amend Recommendation number 1 to read:

"1. It is recommended that the Committee on Cults and Quackery continue an educational program on cultists and quacks and that it seek additional ways of informing the Oklahoma public and members of the OSMA about these dangerous practitioners."

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section III. Medical-Legal Relations Committee.

"Your committee recommends approval of this section of the report with the following amendment: On page 6, amend Recommendation number 1 to read:

"1. It is your committee's recommendation that all members of OSMA be urged to attend the Medical-Legal Institute at Fountainhead Lodge, July 23-25, 1970."

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Section IV. Medicine and Religion Committee.

"Your committee recommends approval of this section of the report with the following amendment: On page 8, replace Recommendation number 1 with the following:

"Recommendations:

"1. It is recommended that the Committee on Medicine and Religion be instructed to continue its present activities.

"2. Since drug abuse is rapidly becoming one of our country's major medical and social problems, it is recommended that the Committee on Medicine and Religion be instructed to continue its efforts in drug abuse education for physicians and clergy."

Doctor Phelps pointed out that the association already had a Committee on Alcoholism and Drug Abuse, and felt that Recommendation No. 2 was superfluous.

Doctor Phelps moved that Recommendation No. 2 be deleted and that this function be taken over by the Committee on Alcoholism and Drug Abuse. Doctor Edward K. Norfleet

seconded the motion.

Discussion followed concerning mutual discussion between physician and clergy on this problem and it was felt there was a need and desire for drug education on this committee.

The following amended motion was made:

Doctor Robert Hogue moved that Recommendation No. 2 be amended by adding "in cooperation with the Committee on Alcoholism and Drug Abuse."

A vote was taken on Doctor Phelps motion and the motion was defeated.

"Mr. Speaker, I move the adoption of this portion of the report as read." The motion was seconded and carried.

Section VI. Committee on Osteopathy.

"Your committee recommends approval of this section of the report with the following amendment: On page 12, change Recommendation No. 1 to read as follows:

"It is recommended that the present Committee on Osteopathy be instructed to establish formal liaison with the Oklahoma Osteopathic Association. The committee should be free to enter into open discussion on any and all problems or areas of concern of either association. However, its main purpose should be to reach, if possible, mutually agreeable solutions to interprofessional problems. Formal relations should be established only if the Oklahoma Osteopathic Association is willing to give its counterpart committee the same latitude of discussion. Any decision on possible policy change will, of course, be taken to the OSMA Board of Trustees and House of Delegates."

Doctor Malcom Phelps moved that in Paragraph 1 the word "instructed" be deleted and the words "encouraged to attempt" be put in, making it read: "1. It is recommended that the present Committee on Osteopathy be encouraged to attempt to establish formal liaison with the Oklahoma Osteopathic Association." The motion was seconded.

Doctor David Carson moved that in Paragraph 1 the word "instructed" be deleted and the words "be not encouraged" inserted in its place, making it read:

"1. It is recommended that the present Committee on Osteopathy be not encouraged to establish formal liaison with the Oklahoma Osteopathic Association." The motion was seconded.



The Speaker then called for a vote on the substitute motion made by Doctor Carson.

*The substitute motion made by Doctor Carson was defeated.*

The Speaker then called for a vote on the motion made by Doctor Phelps.

*The motion made by Doctor Phelps carried.*

"Mr. Speaker, I move the adoption of this portion of the report as amended." The motion was seconded and carried.

Section VII. Committee on Pharmacy.

"Your committee recommends approval of this section of the report.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of the report of the Council on Professional and Intervocational Relations as amended." The motion was seconded and carried.

#### REPORT OF REFERENCE

##### COMMITTEE NO. III

Presented by S. N. Stone, M.D., Oklahoma City, Chairman

"Mr. Speaker and members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:"

Item I. Report of the Council on Socio-Economic Activities.

"Your committee recommends approval of the entire report with the following amendments:

"Under Section II, report of the Prepaid Medical Care Committee, Recommendation No. 4 should be stricken and the following adopted in its place:

"4. It is recommended that the OSMA Board of Trustees be authorized to negotiate with Blue Shield to find a mechanism whereby a physician can avoid participating in the UCR program on an individual case basis if he so desires. This mechanism should be in addition to the so-called agreement in advance method."

"A new Recommendation No. 5 should be added as follows:

"It is recommended that UCR payments not be construed as a service contract."

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item II. Resolutions No. 2 and 4.

"Your committee agrees with the principles outlined in these resolu-

tions, but the situation referred to has been resolved by the actions of Reference Committee No. I.

"Your committee therefore recommends that Resolutions No. 2 and 4 be tabled indefinitely.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried. Item III. Resolution No. 14.

"This resolution also dealt with the provider agreement circulated by the Department of Public Welfare. Your committee wishes to amend this resolution by striking it entirely and substituting the following:

"WHEREAS, the provider agreement, known as Form MA-S-96, is not necessary in order for the Department of Public Welfare of the State of Oklahoma to comply with the provisions of Title XIX, and said department has discontinued use of this form,

"NOW, THEREFORE, BE IT RESOLVED, that the director of the Department of Public Welfare be requested to return to the signer any and all provider agreements now in his possession."

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried. Item IV. Resolution No. 5.

"Your committee recommends that Resolution No. 5 not be adopted.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

Item V. Resolution No. 6.

"Your committee recommends that resolution No. 6 not be adopted.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried. Item VI. Resolution No. 12.

"Your committee recommends that resolution No. 12 not be adopted.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried. Item VII. Resolution No. 15.

"Your committee recommends the adoption of Resolution No. 15.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried. Item VIII. Resolution No. 16.

"Your committee recommends that resolution No. 16 not be adopted."

Doctor Jack Richardson moved that Resolution No. 16 be adopted.

Doctor Rhinehart moved to table Resolution No. 16. The motion was seconded.

The Speaker then called for a vote on Doctor Rhinehart's motion. The count was 58 for and 49 against.

Motion carried to table Resolution No. 16.

Item IX. Resolution No. 17.

"Your committee recommends that Resolution No. 17 not be adopted."

Doctor Richardson spoke for the resolution and felt that the OSMA should not help sell any policy over another or allow any company to say it is the insurance carrier of the OSMA.

Doctor Hendren made the comment that when other companies allowed physicians on their policy making boards, he might feel that way, but while Blue Cross-Blue Shield allows this to be done, this degree of cooperation should be recognized.

Doctor Loy moved that the third paragraph of Resolution No. 17 be changed to read:

"NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association adopt the policy that all third parties be shown equal favoritism, partiality or preference by organized medicine and its members wherein the patient's welfare may be benefited." The motion was seconded.

The Speaker called for a standing count.

Doctor Loy's motion carried.

"Mr. Speaker, I move the adoption of this portion of the report as amended." The motion was seconded and carried.

Item X. Resolution No. 19.

"Your committee recommends the adoption of this resolution.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of the report as amended." The motion was seconded and carried.

#### REPORT OF REFERENCE

##### COMMITTEE IV.

Presented by Malcom Phelps, M.D., El Reno, Chairman.

"Mr. Speaker and members of the House of Delegates, your reference committee gave careful consideration to the items referred to it and makes the following report:" Item I. Council on Insurance.

"Mr. Speaker, your reference committee approves this report and recommends that the Council on Insurance be instructed to investigate additional group term life insurance programs to see if a more advantag-



eous rate or plan could be secured for OSMA members.

"Your reference committee wishes to commend the Council on Insurance for its success in maintaining low rates in our professional liability program. The committee urges the Council on Insurance to continue its educational program on malpractice prevention. Since rates are determined by loss ratios, it behooves each individual and the association to continue all possible measures to reduce malpractice, both real and alleged.

"Mr. Speaker, I move the adoption of the Report of the Council on Insurance." The motion was seconded and carried.

#### Item II. Council on Public Health.

"Your committee recommends approval of the Council on Public Health Report with the following amendments and comments:

#### Section II. Special Council Activities

##### A. Report of the Interagency Council on Smoking and Health.

"On page 3, paragraph 2, delete the period after the word 'needed' and add 'and available.'

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

##### B. Automotive Crash Injury Research Program

"Your reference committee accepts this report for informational purposes and commends the physicians who participated in this study.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

##### C. American College of Surgeons, Committee on Trauma (Oklahoma). Ex - Medical Corpsmen Retraining Proposal.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

##### D. Special Advisory Committee to the State Board of Corrections.

"Your committee commends this special committee for its outstanding report and encourages OSMA members practicing in the vicinity of Oklahoma penal institutions to cooperate with prison medical staffs in providing medical care for Oklahoma's incarcerated.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

#### Section III: Committee on Alcohol-

ism

"Your committee approves the report and recommends that the Committee on Alcoholism be henceforth known as the Committee on Alcoholism and Drug Abuse.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

#### Section IV: Disease Screening Committee.

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

#### Section V. Committee on Immunization.

"Your committee wishes to amend recommendation of the Immunization Committee on page 14, by inserting a period after the word 'program' and striking the remainder of the sentence.

"Mr. Speaker, I move the adoption of this portion of the report and your reference committee commends all those who participated in the immunization campaigns." The motion was seconded and carried.

#### Section VI: Committee on Maternal Mortality

"Mr. Speaker, your committee recommends approval of the report of the Committee on Maternal Mortality with the following amendment in the second recommendation, on page 22, deleting the period after the word 'hospitals' and inserting the following: '. . . which will be readily available.'

"Mr. Speaker, I move the adoption of this portion of the report." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of the report of the Council on Public Health as amended." The motion was seconded and carried.

#### Item III. Council on Rural Medicine.

"Your reference committee accepted the informational report of the Council on Rural Medicine and wishes to commend this Council for its outstanding efforts in trying to supply additional physicians in needed areas. The reference committee was impressed with the broad representation on the Council but made the observation that few of the physicians represented are from communities or areas which need additional physicians. Your reference committee recommends that future appointees to this Council be selected from areas that need physicians.

"Mr. Speaker, I move the adoption of this portion of the report." The

motion was seconded and carried. Item IV. Resolution No. 13.

"Your committee amended Resolution No. 13 by adding after the last 'WHEREAS,' on page 2, an additional 'WHEREAS' as follows:

" 'WHEREAS, the IPPC and other organizations have condemned the FDA for the proposed warning leaflet;' . . . and by striking all of the resolves and adding a new resolve as follows:

" 'NOW, THEREFORE, BE IT RESOLVED, that OSMA is opposed to any agency of the Federal Government interfering in the practice of medicine to the extent of the proposed warning leaflet; and

" 'BE IT FURTHER RESOLVED, that a copy of this resolution be submitted to the Commissioner of FDA and to the Oklahoma Delegation to Congress.'

"Mr. Speaker, your committee recommends adoption of Resolution No. 13 as amended." The motion was seconded and carried.

"Mr. Speaker, I move the adoption of the report as amended." The motion was seconded and carried.

Doctor Phelps then asked permission of the House to read a resolution submitted by Richard W. Loy, M.D., entitled "Student Unrest."

After discussion, the "Resolved" was amended to read:

"NOW, THEREFORE, BE IT RESOLVED, that we, the members of the Oklahoma State Medical Association express our appreciation and approval of the actions taken by the Governor of Oklahoma, the Board of Regents, and our own Medical School Dean, to minimize disruption at the institutions of higher learning in Oklahoma, and

" 'BE IT FURTHER RESOLVED, that copies of this resolution be forwarded to the aforementioned individuals and to members of the Oklahoma Congressional delegation.'

Doctor Phelps moved that the resolution be adopted as amended. The motion was seconded and carried.

Duane Brothers, M.D., Tulsa, presented the House with a letter from Delegate Harlan Thomas, M.D., Tulsa, asking that his voting privileges be given to Doctor Brothers since he was ill and unable to attend the Closing Session of the House.

Lloyd A. Owens, M.D., moved that his letter be accepted and Doctor Brothers allowed the vote of Doctor Thomas. The motion was seconded



and carried.

#### V. ELECTION OF OFFICERS

The Speaker instructed the Tellers to distribute the ballots, and the office of President-Elect and Delegate to the AMA (Position No. 1) were voted on.

Lucien M. Pascucci, M.D., Tulsa, was elected to the office of President-Elect.

Scott Hendren, M.D., Oklahoma City, was elected to the office of Delegate to the AMA.

The Speaker announced that the following officers are elected by acclamation:

Vice-President: Marvin K. Margo, M.D., Oklahoma City

Secretary - Treasurer: Stanley R. McCampbell, M.D., Oklahoma City

Speaker of the House: Roger Reid, M.D., Ardmore

Vice-Speaker of the House: S. N. Stone, M.D., Oklahoma City

Alternate Delegate to the AMA— (Position No. 1): Rex E. Kenyon, M.D., Oklahoma City

Delegate to the AMA (Position No. II): Harlan Thomas, M.D., Tulsa

Alternate Delegate to the AMA (Position No. II): Orange M. Welborn, M.D., Ada

#### ELECTION OF TRUSTEES AND ALTERNATE TRUSTEES:

The Speaker announced that the following Trustees and Alternate Trustees are elected by acclamation:

Trustee District No. I: Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, and Washington counties.

Trustee: Jess D. Green, M.D., Bartlesville

Alternate Trustee: Edward W. Alensworth, M.D., Vinita

Trustee District No. II: Kay, Noble, Osage, Pawnee and Payne counties.

Trustee: James A. Webb, M.D., Ponca City

Alternate Trustee: Thomas C. Glasscock, M.D., Ponca City

Trustee District No. III: Garfield, Grant, Kingfisher and Logan counties.

Trustee: John A. McIntyre, M.D., Enid

Alternate Trustee: Robert J. Hogue, M.D., Guthrie

Trustee District No. IV: Alfalfa, Beaver, Cimarron, Dewey, Ellis, Harper, Major, Texas, Woods and Woodward counties.

Trustee: John X. Blender, M.D., Cherokee

Alternate Trustee: Richard Burgtorf, M.D., Shattuck

Trustee District No. V: Beckham, Blaine, Canadian, Custer and Roger Mills counties.

Trustee: C. Riley Strong, M.D., El Reno

Alternate Trustee: Ross Deputy, M.D., Clinton

Trustee District No. VIII: Tulsa County

Alternate Trustee: Myra A. Peters, M.D.

The Speaker asked all new officers to come to the front of the room and be recognized.

The 64th annual meeting of the House of Delegates adjourned at 11:50 a.m.

Recorded by Madelyn Burton.

#### Report of the PRESIDENT (APPROVED)

Mr. Speaker, Members of the House of Delegates:

I appear before you with this report having ambivalent feelings, almost as I had at my inauguration one year ago.

In addition to the goals of helping our staff and officers and committees to more effectively function in an administrative capacity, and to know and serve all of our members better, I had a few major areas of emphasis in which I immediately embarked.

The first of these was to create a working liaison with the leadership of all special-interest societies, and this was done. Much of the value of this group was diluted by innumerable diversions to meet the daily crises involving us all. Our Planning Committee has recommended that liaison with special-interest groups be continued and perfected — hopefully to prevent some of the crises just mentioned and to assist in their solution.

Next was the increased activity of our Committee on Planning. I felt we must at long last decide that we could not, as an association, do all things for all people. I felt that we must establish goals and from them delineate priorities.

A small and knowledgeable group such as the Committee on Planning, is well equipped to evaluate priorities necessary to the preservation of the profession.

In addition, proposals of national import which take the form of resolutions to the AMA need a clearing

house prior to their submission to our Trustees and Delegates for approval. Using the committee for this purpose has helped immeasurably during the last year in strengthening the voice of the OSMA at the national level.

Another major goal was to improve our internal communication. The total effectiveness of an association depends entirely upon our unity of ideas and purposes and this in turn is dependent on how well each OSMA member is informed regarding major issues. This year you have received pertinent material on these issues through *The Journal* and the *OSMA NEWS*.

During this same time, a concerted effort was made to furnish news media with information regarding our work, our views on matters involving the profession and our interpretation of news items emanating from other sources.

We have been only partly effective with the news media, and this is not to be unexpected when you consider the power of our adversaries. Even so, actions and reactions taken at the state level received more attention from the media than those issued at the national level and even better press relations could be obtained by greater use of the news media at the county society level.

Your association will continue to improve its press and public relations. Some four years ago an extra staff man was employed for full time public relations work, but then the state legislature started annual sessions and this turn of events partially negated our public relations ability by diverting his time to other problems.

By definition, public relations involves doing something good and then telling about it. I'll have more to say about it later on in the convention, but the OSMA spearheaded a tremendously successful public relations program in carrying out the Rubella immunization program. This type of activity is a splendid demonstration of the definition of public relations.

As for internal problems and activities, I will not detail these since they are well-covered in the reports of the various councils and committees of the association. Those who have served in the organization structure of the association during the past year have worked hard and effectively, and I am very grateful for



the services they have rendered to me and to the profession as a whole.

Some comment on governmental relations is in order. The under-secretary of the Department of Health, Education and Welfare has said on more than one occasion that government's 36 percent of the health care dollar will be used to exert leverage for the attainment of dramatic changes in our health care delivery system. Persons high in government and those high and affluent in the labor movement, not to mention the communications media, are advocating changes totally foreign to the thought processes of many physicians. Whether the "health crisis" is manufactured or real I will not say; but I wonder if it is reflective of the thoughts of the so-called "silent majority."

Regardless of the right or wrong of the current movement for change, it appears that there are only two major deterrents which are thwarting our adversaries in the attainment of their goals:

1. Expenditures in Vietnam are restricting further major investments in domestic problems.

2. The realists who advocate universal health insurance know that today's health manpower supply is inadequate to sustain their program.

Compulsory "Universal Health Insurance" may be upon us by 1972, and its planners are confident they can achieve the goal by 1975. They say it will be "consumer oriented" . . . but they mean "consumer dominated." They hope to phase out fee for service medical practice . . . they propose to make your "non-system" become their "system" no matter what the cost and no matter what chaos their system will impose upon the profession and the public.

Regardless of this colossal issue which is just around the corner, present government programs are becoming more and more restrictive. Fixed fee schedules at the 75th percentile are proposed for *this* year and any fee increases will have to be based on a "cost-price" index.

You can see why the unity referred to earlier is becoming such a necessity. The days of internal bickering—either on a society-to-society, speciality-to-speciality, or person-to-person basis must come to an end now

. . . we can no longer afford this "luxury" of wasted motion.

I suggest it's time that we "amateur" negotiators be either replaced or reinforced by experienced professionals both at the state and national levels. If it's our destiny to be transformed into a trade union, then let us proceed with all the expertise and power available to us.

To meet tomorrow's problems we must have either "unity" or "discipline" . . . whichever you wish to call it. A form of singular purpose must be achieved soon or we may find ourselves without an effective association. When and if this happens, individual doctors will be at the mercy of any and all predators.

There are, of course, many disappointments associated with an organizational year, principally in the area of observing problems that need a solution and knowing all the while that the road to solution is blocked by significant obstacles. I have been personally disappointed in my inability to visit more county medical societies; this leaves me with a sense of neglect, not to mention the fact that I have enjoyed my visits to some societies so much. Another disappointment to me, and I am sure to those presidents who have gone before me, is that all my goals at the beginning of the year were not attained. Some would not lend themselves to solution and I was distracted by emerging problems not anticipated at the beginning of my term of office.

Additionally, I feel distressed that no source of reliable socio-economic information has been available for the use of our Medical Insurance Review Committee, except that fee information provided to us by third party financiers of medical care. The collection and processing of data involving the value of medical services in the various economic areas of the state is presently beyond our financial resources, yet it is becoming more and more essential in our day-to-day dealings with government and insurance organizations.

Government, by indirection, has hurt the association economically. Harassment of drug manufacturers has reduced their promotional budgets and has resulted in a steady decline in OSMA exhibit sales and Journal advertising. Of course, this decline is understandable, even if traumatic and the OSMA appreciates

those manufacturers who have continued to support activities of the association. I encourage each individual doctor to discuss this problem with all manufacturer's representatives who call on him.

Lastly, and most pleasantly, as I look back over the year I recall the many kindnesses and courtesies which have been extended to me. I also wish at this time to publicly commend our executive staff; Don Blair, Executive Director, and his associates David Bickham and Ed Kelsay, have been indispensable to me and certainly serve us all in a manner which is a credit to them and to our profession. Under their direction the ladies of the staff have also been most efficient, helpful and dedicated.

I have been greatly honored to have served you this past year. In all honesty, I look forward to being relieved of the burdens of leadership while, at the same time, I will cherish the memories of my year as president.

I know that you will join me in expressing confidence in Doctor Calhoun and that you will give him your full support during his term of office.

On May 16th I will no longer be president of this association, but I will still be a member and I herewith volunteer to serve Doctor Calhoun and his organization in any capacity where I may be helpful.

#### REPORT OF THE SECRETARY-TREASURER (APPROVED)

##### *Financial Statement*

As pointed out in previous reports, the association's fiscal year ends May 31st, so a complete audit of accounts cannot be presented at the time of the annual meeting. However, to provide Delegates with an indication of the OSMA's financial status, following are reports on the first eleven months' operations in our two basic operational accounts, the Membership Account and the Journal Account:

#### MEMBERSHIP ACCOUNT

##### *Income:*

Membership Dues	\$135,927.00
AMA Commissions	1,433.00
Interest	2,716.00
Scholarship and Loan Fund	
(from dues)	8,483.00
Building Lease	2,450.00
Postgraduate Courses	160.00
OSMA Newsletter	1,200.00



Total Income	\$152,369.00
<i>Expense:</i>	
Fixed Expenses	95,266.00
Depreciation	2,750.00
Councils and Committees	
Public Policy	\$5,571.00
Insurance	100.00
Professional Education	138.00
Socio-Economic	-
Public Health	582.00
Prof. & Intervocational	173.00
	6,564.00
Scholarship and Loan Fund	8,483.00
In-State Travel	2,296.00
Out-State Travel	9,945.00
Okla. Health	
Careers Council	3,300.00
Mortgage Payments-	
Building	1,828.00
Total Expense	\$130,432.00
Surplus	\$ 21,937.00

JOURNAL ACCOUNT

<i>Income:</i>	
Journal Ads, Sales,	
Subscriptions	\$31,259.00
Subscription from Dues	3,201.00
Directory—Ads and Sales	2,338.00
Total Income	\$36,798.00
<i>Expense:</i>	
Journal Expense	\$38,144.45
Directory Expense	2,550.00
Total Expense	\$40,694.45
Deficit	\$ 3,896.45

Thus, at a glance, the surplus in one category of operation and the deficit in the other indicates that we presently have a surplus of \$18,040.55, whereas our budget for the year predicted a surplus of only \$9,310. A few editorial comments are in order, however.

There are known commitments during May (above our normal operating expenses); approximating \$6,000 (such as a \$2,000 obligation for the year's educational television, \$1,200 authorized to the Student American Medical Association, accounts payable for presidential expenses, etc.). When these obligations are considered, we show an anticipated surplus of about \$12,000.

Secondly, to defer interest payments on the building mortgage, the loan was closed later than anticipated, so we were over-budgeted by about \$1,800 in this area. Another area of over-budgeting was in out-of-state travel where, based on the previous year's experience, we budgeted \$13,000 but have spent only \$9,945 to date.

Nevertheless, it appears that a final audit of our operations will show a larger surplus than usual. Expenses

have been less than anticipated and we have enjoyed greater income from the dues increase.

National advertising in the Journal continues to decline in volume, but this has been partially offset by increasing our rates. We had predicted a \$7,000 loss on the publication, whereas through eleven months it approximates \$4,000.

The annual meeting has not been included in the above figures. It is traditionally designed to be a break-even activity, but for reasons outlined in the Annual Meeting Committee report, exhibit income has declined and the Board of Trustees has initiated a modest registration fee.

An accounting of the building expansion financial transactions is contained in the report of the Committee on Planning and will not be repeated in this report.

As to a budget for the coming fiscal year, we will receive the full benefit of the \$25 dues increase effective January 1, 1970 (only 5/12 of this new income, January through May, accrued to the benefit of the current fiscal year). As the Delegates know, a budget is only a guide to activities which are rather unpredictable in a service organization having such varied interest and emerging problems. Moreover, the actions taken at this policy-making meeting may substantially alter the picture, and it will undoubtedly be necessary to prepare a revised budget at the close of the annual meeting.

However, following is a proposed budget for the consideration of the House of Delegates:

1970-71 BUDGET

<i>Income:</i>	
Membership Dues	\$177,000
Scholarship and Loan Fund (from dues)	9,500
Journal Ads, Subscriptions	36,000
Membership Directory Ads, Sales	3,500
Annual Meeting	22,000
Interest	2,000
AMA Commissions	1,400
Postgraduate Courses	1,000
OSMA Newsletter Ads	1,200
Building Lease Income	4,200
Total Income	\$257,800
<i>Expense:</i>	
Fixed Expenses	\$115,000
Depreciation	4,000
Student AMA	4,000
Councils and Committees	
Public Policy	\$6,500
Insurance	500

Professional Education	4,000
Socio-Economic Activities	2,000
Public Health	1,500
Professional-Inter-Vocational Relations	1,000
	15,500
Scholarship and Loan Fund	9,500
In-State-Travel	3,000
Out-of-State-Travel	12,000
Journal	40,000
Annual Meeting	22,000
Okla. Council for Health Careers	3,600
Directory Printing	3,000
Mortgage Payments	5,484
Total Expense	\$237,084
Surplus	\$ 20,716

Recommendations:

1. Regarding the anticipated surplus this year, it is recommended that the House of Delegates authorize the Board of Trustees to designate one-half of the final audited surplus to bolster the association's reserves (now \$27,841.69).
2. It is recommended that the proposed budget be approved pending any revisions made necessary by actions at this annual meeting.
3. Regarding the anticipated surplus for the next fiscal year, it is recommended that the House of Delegates instruct the Board of Trustees to dedicate up to \$10,000 toward retiring the loan made necessary by the building expansion program.

Report of the  
BOARD OF TRUSTEES  
(APPROVED)  
BOARD ACTIONS

Five meetings of the Board of Trustees have been held since the last annual meeting. This report covers the significant actions of these meetings . . . actions taken at the May 14th meeting are covered in the accompanying Supplemental Report.

Reportable actions taken at meetings held August 9th, October 24th, February 1st, March 22nd and April 28th are summarized below:

1. The expansion of the headquarters building, as instructed by the House of Delegates, has been carried out with the assistance of the Committee on Planning. Principal Board actions in this respect are contained in the committee report.

2. The Board has been kept abreast of problems associated with government health care programs. Some of these problems are referred to in the



report of the Governmental Relations Committee, but one matter of principal concern to the Board has involved federal law and Medicaid regulations dealing with provider agreements. Section 1902 (a) (27) of the Social Security Act requires an agreement between the state Medicaid administrative agency and every person or institution providing health services to Medicaid beneficiaries. Basically, the law provides that providers must agree to keep adequate records to fully document their claims against the federal-state matching funds program, and to furnish such information as the state agency may from time to time request. The format of the agreement being circulated at the time of this writing is objectionable to the Board, and two mailings to the OSMA membership have expressed this opposition. Again, at this writing, an alternate and more desirable plan appears to have been made possible through the negotiations of President Denyer, the Director of the Department of Public Welfare, and federal officials including Department of HEW Undersecretary Venneman. The Board of Trustees has approved the alternate plan (to simply place the language of the law in the claim form jurat, in lieu of a more extensive bilateral contract) and will correspond with the entire profession following receipt of the official action to be taken by the Oklahoma Public Welfare Commission on May 5th. More detailed information as to the final outcome of this controversy will be contained in the supplemental report reflecting actions taken at this annual meeting.

The Board has also objected strenuously to a new federal regulation which requires a statement regarding fraud to be imprinted on each Medicaid claim form. OSMA representatives have voiced opposition to the Oklahoma Congressional Delegation, asking that the regulation be rescinded by Secretary of HEW Finch.

3. The Board, on recommendation of the Appropriations and Audit Committee, approved the annual audit of the association's accounts and mailed copies to the House of Delegates.

4. A revised budget, prepared following the 1969 annual meeting and taking into account new dues income and financial transactions en-

acted by the House, was approved by the Board as a guide for the 1969-70 fiscal year.

5. The dates for the 1971 annual meeting were adjusted by the Board to April 29-May 1 in order to avoid a conflict with the International Oil Exposition.

6. As directed by the House of Delegates, a referendum of the membership regarding compulsory or voluntary AMA membership was taken. Of 1,212 replies, 652 favored continued required membership in the AMA and 560 were opposed. As required by the resolution, the results were printed in the Journal and OSMA News, and are to be considered formally at the 1970 annual meeting of the House of Delegates.

7. The Board adopted the AMA Judicial Council's position regarding the charging of interest by physicians, as follows:

"It is not in the best interest of the public or the profession to charge interest on an unpaid bill or note or to charge a penalty on fees for professional services not paid within a prescribed period of time; nor is it proper to charge a patient a flat collection fee if it becomes necessary to refer the account to an agency for collection."

In this regard, the Board received and disseminated an opinion from the OSMA legal counsel that physicians abiding by the foregoing rule and not making specific installment arrangements are not included within the purview of the Truth In Lending Act.

8. Regarding the acceptance of credit cards for payment of professional services, the Board ruled it is not unethical for a physician to participate in such programs, with the provisos that he does not permit his name to be used in advertising or in directories, and that he limit public notice of his participation to a small, discreet sign in his reception room or business office.

9. Regarding a change in management of the OU Medical Center and the Center's relationship to the Norman campus, the Board said:

"The Board of Trustees commends the Oklahoma University Board of Regents for its action of October 15, wherein it adopted the following policy statement:"

"The Vice-President and Director of the Medical Center is the executive officer for the Oklahoma Medical Center Campus. He is re-

sponsible for all fiscal, academic and service units of that campus and the head of each of these units is responsible to the Vice-President and Director and through him to the President of the University."

"Further, the Board (OSMA) commends Doctor Dennis for his action in response to this policy statement. In order to better fulfill his position as Vice-President and Director of the Medical Center, Doctor Dennis voluntarily resigned the prestigious position of Dean of the Medical School. Moreover, since the Medical Center is a state agency serving the entire state, to the extent of accepting 60 percent of its students from other universities of the State of Oklahoma, it should remain a separate institution and operate independently as the Medical Center Campus."

10. The Board supported the position of the Prepaid Medical Care Committee in regard to relationships with Oklahoma Blue Shield, including a follow up report: (1) To commend Blue Shield for resolving claims processing problems; (2) To accept a prescribed plan of the Blue Shield Board of Trustees to form a third corporation and board for dental services and to restore physician strength on the Blue Shield Board to 50 percent.

11. The Board endorsed the newly-created "Oklahoma Lung and Research Development Program," on the recommendation of Edward R. Munnell, M.D., Oklahoma City.

12. The Board endorsed the recommendation of the Rural Medical Council and the Financial Aid to Education Committee to redirect the association's loan and scholarship program to provide non-refundable loans to students who will agree to serve in rural areas after completion of training.

13. Due to the difficulty in selling exhibit spaces to offset annual meeting expenses, the Board considered alternatives such as cutting the scope of the meeting, subsidizing losses with general dues income, or charging a registration fee as is done on other OSMA postgraduate education programs. The Board took this action to authorize the Annual Meeting Committee to charge a registration fee of up to \$10.00.

14. The Board approved resolutions 1 and 2 (originally authored by the Oklahoma Academy of General Practice) recognizing, however, that final



action must be taken by the House of Delegates.

15. A 50-Year Club pin was awarded to J. Walker Morledge, M.D., Oklahoma City.

16. Dues were waived for sixteen Oklahoma physicians on the basis of financial hardship.

17. Life Membership applications were approved during the year for the following members (others may be included in the supplemental Board of Trustees report):

- Robert W. Witcher, M.D., Tulsa (now deceased)
- Hugh J. Evans, M.D., Tulsa
- J. Walker Morledge, M.D., Oklahoma City
- Wallace R. Coyner, M.D., Edmond
- James B. Snow, Sr., M.D., Oklahoma City
- Rufus Q. Goodwin, M.D., Oklahoma City

18. The Board submitted nominations for two positions on the State Board of Medical Examiners. Edgar W. Young, M.D., was re-appointed to the Board by the Governor, and the following names have been submitted for the position now held by Roger Reid, M.D., Ardmore: Doctor Reid, W. Paul Dickinson, M.D., Ardmore, and Austin W. Haddox, M.D., Antlers.

19. Based on the Board's nominations, Wendell L. Smith, M.D., Tulsa, was re-appointed to the Department of Public Welfare's Advisory Committee for Crippled Children, and George R. Russell, M.D., Tulsa, was re-appointed to the Department's Advisory Committee on Medical Care for Public Assistance Recipients.

20. The Board of Trustees reports the following breakdown of membership:

Active Members	1900
Active Dues-Exempt Members	38
Applications Pending	67
Life Members	143
Affiliate Members	6
Junior Members	42
TOTAL	2,196

Recommendations:

1. It is requested that the actions taken by the Board of Trustees contained in this report be affirmed by the House of Delegates.

2. As required by Resolution No. 1 at the 1969 annual meeting, the findings of a statewide membership referendum on continued required membership in the American Medical Association were to be made available

for the formal consideration of the House of Delegates. The findings were 652 in favor of the current policy and 560 against compulsory AMA membership.

BOARD OF TRUSTEES  
SUPPLEMENTAL REPORT  
(APPROVED AS AMENDED)

At the annual meeting of the Board of Trustees, held at 9:00 a.m. on May 14th, the following actions of interest to the House of Delegates were taken:

I. Doctor C. Riley Strong, El Reno, was re-elected as chairman of the board for a period of one-year, and Doctor Orange M. Welborn, Ada, was elected for a one-year term as vice-chairman of the board.

II. At the request of the Tulsa Surgical Society, the authorship of Resolutions 16 and 17 were changed to be introduced by Edward L. Moore, M.D., and Jack L. Richardson, M.D., both of Tulsa.

III. Two resolutions submitted on May 14th were accepted for referral to the House of Delegates. These are Resolutions 18 and 19.

IV. In recognition of the dedicated service of the late C. M. Hodgson, M.D., Kingfisher, formerly Speaker of the House of Delegates, the Board of Trustees unanimously recommended to the House of Delegates that an appropriate certificate of appreciation be issued to Mrs. Hodgson.

V. According to the bylaws of the Oklahoma Medical Political Action Committee, nominations for the OMPAC board were presented by the OMPAC chairman to the OSMA Board of Trustees, and the OSMA board approved the appointments as per the recommendations.

VI. Doctor Mark R. Johnson was re-elected to a three-year term as editor-in-chief of the Journal.

VII. The nominations for appointments to the Blue Cross and Blue Shield Board which are made by the president and chairman of the board, were given to the Board of Trustees and these nominations were accepted.

VIII. New state legislation provides for a Health Facilities Advisory Council regarding licensure standards for hospitals and nursing homes, and the OSMA is entitled to one representative on the 14-member council. The following physicians were nominated by the Board of Trustees for this appointment: Alpha L. John-

son, M.D., M. Joe Crosthwait, M.D., and Edward K. Norfleet, M.D.

IX. It was suggested to the Board of Trustees by the Oklahoma Medical Research Foundation that the OSMA might wish to consider appointing a physician other than the state association president to serve on the foundation's Board of Directors. However, the Board of Trustees voted to continue the current policy of the president representing the association, and the appointment in the future to be studied.

X. In addition to the sixteen OSMA members whose dues were waived for financial hardship during the course of the present year (as reported in the Board of Trustees Report) the Trustees approved an additional physician on May 14th for dues exemption for the current year.

XI. In addition to the Life Membership applications previously approved and reported in the Board of Trustees report, the following physicians are recommended by the Board of Trustees for Life Membership classification:

- Judah K. Lee, M.D., Tulsa
  - Horace H. Porter, M.D., Tulsa
- Report of the  
MEDICAL SCHOOL LIAISON  
COMMITTEE  
(APPROVED)

- Committee Members
- C. Riley Strong, M.D., El Reno, Chairman
  - James L. Dennis, M.D., Oklahoma City
  - William P. Jolly, M.D., Lawton
  - C. L. Tefertiller, M.D., Altus
  - James R. Taylor, M.D., Bartlesville
  - Robert S. Ellis, M.D., Oklahoma City
  - Jed E. Goldberg, M.D., Tulsa
  - Oliver H. Patterson, M.D., Sapulpa

During the past year your Medical School Liaison Committee has conducted two projects for the association. Both involved medical students and were in compliance with last year's House of Delegates directive for the committee to serve as liaison with the Student American Medical Association Chapter at the medical school.

The first project was a seminar for residents, interns and medical students on the Business Side of Medical Practice. It was conducted in two half-day sessions on November 2nd and 9th in the Oklahoma Research Foundation Building, Oklahoma City.

The November 2nd session dealt



with personal insurance, government medical programs, various types of medical practices, operational efficiency in practice, hospital privileges and relations, what to expect from detail men and the purchase of supplies.

The session on November 9th dealt with business insurance, the hiring of personnel, leasing and buying of equipment, billing and collection systems, and record keeping. In addition the second session had an hour and a half lecture on malpractice prevention from George Short, Defense Attorney for the Insurance Company of North America.

Approximately 30 students, residents and interns attended each of the two sessions.

The second major project for your committee was a joint effort between the committee and the SAMA Chapter at the medical school. It was a project to furnish summer employment for medical students.

All physicians and hospitals in the state were contacted in the name of the committee and asked if they would have any openings for summer employment. Approximately 50 job opportunities were located in this manner.

While the committee was soliciting information on job opportunities SAMA was surveying the student body to determine who needed summer employment and where they would like to work. The students were then matched with the jobs available and instructed to contact the physician or hospital directly. The actual number of students employed through the program was not known at the time of the writing of this report.

Your committee's other activities during the year centered around promotion of the medical school. In this regard, on October 21st James L. Dennis, M.D., explained to the committee why he had resigned as Dean of the Medical School. The doctor stated that this would allow him more time to work on the fiscal affairs of the medical center area. Although the medical center is considered a portion of Oklahoma University and operates on an \$18 million budget with an additional \$5 million in research grants, there is no administrative staff to handle its fiscal affairs in Oklahoma City.

On October 15 the O.U. Board of Regents allowed Doctor Dennis to resign as Dean of the Medical School and to retain his position as Vice President and Director of the Medical Center. In addition, they adopted a policy that he would be the chief executive officer of the medical center for both academic and fiscal affairs. In this position all matters involving the medical center would be channeled through him to the University President and the Board of Regents.

It is thought that the new policy statement from the Board of Regents will enable the Vice President and Director to better coordinate the medical center's administrative activities. The new policy was hailed by the OSMA Board of Trustees during its October meeting and Doctor Dennis was commended for his outstanding service.

#### *Recommendations:*

1. It is recommended that the Medical School Liaison Committee continue to inform itself of the current developments affecting the University of Oklahoma Medical School and continue an ex-officio subcommittee of itself for liaison between the association and the Oklahoma Chapter of the Student American Medical Association.

#### MEDICAL SCHOOL LIAISON COMMITTEE SUPPLEMENTAL REPORT (ACCEPTED FOR INFORMATION ONLY)

#### *Additional Recommendations:*

As Chairman of the Medical School Liaison Committee, I recommend that the Oklahoma State Medical Association instruct its Medical School Liaison Committee to have a conference with the proper officials at the Medical School and request that future applicants for admission to the Oklahoma Medical School be screened more thoroughly for their social and personal ideas about the practice of medicine.

I further believe that there should be definite political pressure, if necessary, used by the OSMA to see that better qualified students be admitted to the Oklahoma Medical School and less of the long haired radicals, (we have a few).

I very strongly recommend that we continue to support the Oklahoma SAMA Chapter with funds to help pay their expenses to the National SAMA Meeting. The amount to be

determined by the Board of Trustees even if it is more than allotted by the budget. Allowing them to use their good judgment in this matter.

Recommendations made by the Chairman, not the entire committee. National SAMA:

This is my fourth National SAMA meeting and I am completely disenchanted with the organization. It is being taken over by the radicals and activists. It is my feeling that the National organization is rapidly becoming a radical and socialistic organization. This is particularly true because the Eastern schools and California schools are very radical, long haired, bearded, impolite and demonstration minded. A goodly number of them went to the Washington demonstration last Saturday from Philadelphia.

Many of them favor National Compulsory Health Insurance and are very verbal about it. There were many resolutions about the Cambodia war, the Vietnam war and some even wanted to take the name American out of the title of the organization. There were several speeches and resolutions on having nothing to do with the AMA. As a matter of fact, they prided themselves of being Anti-AMA.

Because there has been such a radical change in the SAMA organization, I wish to recommend that we instruct our Oklahoma delegates to the AMA to make inquiry into the relationship between the AMA and the SAMA on the national level.

It is my opinion, that we, as members of the OSMA and the AMA should be very cognizant of this activist organization. Remember, they are the future physicians.

*Report on the SAMA Convention,  
May 6-8, 1970, Oklahoma:*

The Oklahoma Chapter of the SAMA is a very hard working chapter. I am pleased with the Oklahoma students. They were all *very well groomed*, polite, studious and attended to their assignments. Oklahoma was greatly involved in the Convention. Jim Hassel was Clerk of the House of Delegates and had a great deal to do with planning the Convention. Joe Fagan, President of the Chapter and Regional Vice-President, was nominated by the National nominating committee for National Vice-President, (he had not planned to run) however, he was defeated. Bill Hamilton served as Chairman of the



Constitution and By-Laws Revision Committee. Many changes were made in the Constitution and By-Laws. Dale Walker served on one of the Reference Committees.

Each member was assigned resolutions and duties at the Reference Committees. They had made a poll of the Oklahoma students about the resolutions and were well prepared on all of them. Many of the resolutions were very radical. However, several of these were defeated. I checked at the Reference Committee meeting and everyone was participating and doing their job in an excellent manner.

Rex Kenyon, M.D. delivered the address at the AMA luncheon, Wednesday noon. He gave an excellent address with many challenges in it. However, many students ate the *free* meal and got up and left before he spoke. This was a reflection of hostility to the AMA and protest against it.

Oklahoma was assigned to the 9th region of SAMA. I attended the regional meetings with our students, as Joe Fagen had been this year's Regional Vice-President, Oklahoma was not eligible to repeat this office (now changed to Regional Trustee). A student from Galveston was elected and he is, in my opinion, conservative. The radicals from Baylor and Southwestern in Dallas tried to get control of the region. (They will try again next year.) A student from Southwestern even organized a march from the hotel to Independence Square and was helping arrange for some of the SAMA students to go to the Washington demonstrations on Saturday. (Please note my remark about the National SAMA.)

Report of the

COUNCIL ON PROFESSIONAL  
EDUCATION

(APPROVED)

Council Members

Irwin H. Brown, M.D., Oklahoma  
City, Chairman

Richard S. C. Grisham, M.D., Bartlesville

Donald L. Cooper, M.D., Stillwater

Forest D. Harris, M.D., Lawton

Y. E. Parkhurst, M.D., Norman

John E. Highland, M.D., Miami

Lazar Greenfield, M.D., Oklahoma  
City

Wm. L. Edwards, M.D., Duncan

James V. Miller, M.D., Ardmore

Ralph Buller, M.D., Hydro  
Jack W. Parrish, M.D., Seminole  
James F. Tagge, M.D., Enid  
Dale Groom, M.D., Oklahoma City  
R. L. Winters, M.D., Poteau  
Larry L. Lowery, M.D., Guymon

INTRODUCTION

This Council has the responsibility of producing and presenting programs of Continuing Education for Oklahoma physicians. Since medical science is doubling about every eight years, this is indeed an awesome responsibility. It is obvious that the Council cannot, with limited staff and resources, provide the medical education courses necessary to keep all Oklahoma doctors up to date. We must rely on the cooperation of other organizations to provide a portion of this education. In that regard the Council would like to express its appreciation to the Oklahoma Regional Medical Program, the Postgraduate Office of the O. U. Medical School and the Department of Continuing Education, University of Oklahoma. Through the efforts of these and others, the medical community has received an enviable array of medical education.

SECTION I

MEDICAL EDUCATION

T.V. SERIES

OSMA, in cooperation with the Medical School's Office of Postgraduate Education was one of the pioneers of medical education via television. The "Always on Tuesday" series carried on stations KETA and KOCO starts each September and runs through May. During the 1969-70 year, 39 programs covering a variety of topics were shown in 31 broadcast hours. OSMA contributes \$2,000 toward the cost of programing, a modest amount considering the almost \$15,000 it would cost had the time been purchased. The March, April and May announcements included registration cards asking for comments on the programing, and preliminary returns indicate that the series has a substantial and responsive audience.

SECTION II

REGIONAL PHYSICIAN SEMINARS

Your council is attempting a new format in its circuit courses. Designed to carry wanted instruction to the physician, the courses require considerable coordination. All hospitals in the state with over 100 beds have been surveyed regarding their interest and capability in helping con-

duct a postgraduate course. From these, several have been selected on a geographic basis as sites for the courses. A physician coordinator selects a subject or subjects based on recommendations of his local colleagues, the council then prepares the program and secures the faculty in cooperation with the Medical School. One such course has been conducted in Bartlesville with excellent response. Others are planned for Lawton, Woodward, Ardmore and Guthrie. The programs start during the lunch hour with a soup and sandwich session and last 3½ to 4 hours. The objective of the scheduling is to give the physician an opportunity to see his patients in the morning and again in the late afternoon.

SECTION III

OFFICE OF POSTGRADUATE  
EDUCATION

One of the most active educational efforts in the state is that of the Office of Postgraduate Education. Fourteen courses of various lengths and topics were conducted this past year. 1,299 physician students attended the 163 credit hours. The courses normally conducted in the Medical Center area are exceptionally well received and offer state doctors the opportunity to return to the university atmosphere.

SECTION IV

REGIONAL MEDICAL PROGRAM

Oklahoma's Regional Medical Program, funded under a Department of Health, Education and Welfare grant has become a major factor in the continuing education of Oklahoma physicians. Organized for the purpose of bringing the latest medical advances in the treatment of Heart disease, Cancer, Stroke and related diseases to the practicing physician, ORMP has literally spread statewide. Sixty-seven Oklahoma communities are actively participating in nine major ORMP projects. (Additional facts about ORMP are available in the exhibit area.)

One of the most impressive of the programs is the continuing education project in Enid. Ten area hospitals are connected by a leased line communication system. Physicians and medical personnel in each of the hospitals can monitor and participate in educational programs originated in any of the ten participating facilities. When not jointly used, the system



can be utilized to listen to audio tapes covering over 200 medical subjects.

A residual of ORMP's coronary care program has been the special training of intensive care teams. Special monitoring arrangements link small hospitals to larger facilities that have specialized personnel. With the monitoring program and voice communications it is possible for a heart specialist in a metropolitan area to direct care for a patient in smaller rural hospitals.

ORMP has maintained a close working relationship with this council and it is anticipated that in the future joint efforts will be undertaken.

#### SECTION V

##### OKLAHOMA COUNCIL FOR HEALTH CAREERS

Forty-three health interested organizations are contributing almost \$50,000 annually in an effort to encourage Oklahoma's young people to pursue health careers. The Oklahoma Health Careers Council after only two years has and is doing a tremendous job in providing the state's medical community with health personnel. The council's primary objective of monitoring and recruiting students has been expanded to include (1) development of educational facilities and programs, (2) presentation of employment opportunities, (3) utilization of personnel, (4) program evaluation, and (5) research projects. Fourteen new educational programs have been initiated in hospitals, universities and colleges. Enrollment in nursing programs has increased by 73% and similar increases are occurring in programs of inhalation therapy, physical therapy, medical technology and licensed practical nurses. Over 19,000 requests for health careers information have been made and filled by the council.

The impact these programs are having on the production and training of health personnel will be felt for years to come.

#### Recommendations:

1. OSMA continue to support the medical education series by contributing \$2,000 to the Office of Postgraduate Education, O.U. Medical Center.

2. OSMA continue to conduct and support programs for the continuing education of OSMA members

through the Office of Postgraduate Education.

3. OSMA continue to support and utilize the programs of the Oklahoma Regional Medical Program.

4. OSMA continue its support of the Oklahoma Council on Health Careers.

#### Report of the ANNUAL MEETING COMMITTEE (APPROVED)

##### Committee Members

Paul D. Erwin, M.D., Okla. City,  
Chairman

Wm. L. Parry, M.D., Okla. City

Lucien M. Pascucci, M.D., Tulsa

Arthur F. Elliott, M.D., Okla. City

P. D. Casper, M.D., Okla. City

Richard B. Price, M.D., Okla. City

Robert D. Shuttee, M.D., Enid

Wm. McDoniel, M.D., Chickasha

E. C. Yeary, M.D., Ponca City

Samuel R. Turner, M.D., Tulsa

David O. Merifield, M.D., Tulsa

Floyd Miller, M.D., Tulsa

Mrs. Robert Smiley, Okla. City

Mrs. Everette Cooke, Okla. City

The Annual Meeting Committee has worked for a year to produce the 64th meeting of Oklahoma physicians. You will undoubtedly note several major changes—business meeting times have been changed to eliminate conflict with Scientific Programs; the Scientific Program format is structured around six system session discussions; more state physician (44) participation in the Scientific Programs than ever before, however, there are still 12 private specialty section meetings featuring 14 out of state speakers; three general sessions on topics of wide appeal will be of interest to physicians, their wives and other medically interested people; two major social events are scheduled with Oklahoma's Colonel Tom Stafford featured at the Inaugural Dinner-Dance. All things considered, this should be one of our more successful meetings.

For the first time, Oklahoma physicians have been asked to pay a nominal registration fee. This fee, approved by the Board of Trustees, will aid in defraying the cost of luncheons, social functions and guest speaker expenses. Our meeting annually costs in excess of \$20,000. Most of the income is received from exhibitors. This year the Committee solicited over 400 potential customers in an effort to sell the 85 technical booth spaces. In addition, your Committee and the OSMA staff contact-

ed personally many other prospects. Even though our meeting is the largest medical meeting conducted in the state, there were many exhibitors who, for various reasons, could not exhibit. The committee makes no apologies about the fee — social events that were paid for individually in years past are *free*, luncheons are still *free*, even though costs have risen, and the cost of producing a Scientific Program of this magnitude is obviously more expensive than in years past. The committee wishes to point out that the OSMA Annual Meeting is by far the most elaborate meeting produced by any state association of comparable size. We feel this is the type meeting desired by the association, however, if the House of Delegates is not willing to face the possibility of future registration fees or underwrite part of the expense from dues income, then the Annual Meeting Committee should be instructed to revise the program format to allow for a reduction in expense.

The committee chairman wishes to thank all of the specialty representatives for their assistance in planning this program.

#### Recommendations:

1. That the House of Delegates instruct the Annual Meeting Committee regarding the alternatives mentioned in this report.

2. That the 66th Annual Meeting of OSMA be held in Oklahoma City May 17 through 19, 1972. The site to be selected by the Annual Meeting Committee after an investigation of the new convention facilities now being constructed.

#### Report of the COMMITTEE ON FINANCIAL AID TO EDUCATION (APPROVED)

##### Committee Members

Scott Hendren, M.D., Okla. City,  
Chairman

Ed L. Calhoon, M.D., Beaver

Hillard E. Denyer, M.D., Bartlesville

Maxwell A. Johnson, M.D., Tulsa

Ennis M. Gullatt, M.D., Ada

Mrs. Virgil Ray Forester, Okla. City

Since 1962, the association has paid \$5.00 for each dues paying member into a Loan and Scholarship Fund managed by the O. U. Medical School. Approximately \$73,000 has been transferred to the account during those seven years. \$24,750 has been given in scholarships (45) to



students on the basis of academic achievement. The balance has been loaned to medical students on the basis of financial need, in low interest loans to be repaid three years after completion of training. Thus, the association has an accounts receivable of about \$48,000. In addition, at the request of this committee, the 1970 funds (approximately \$10,000) have been frozen subject to House of Delegates action on the recommendation of this committee.

Incentives to encourage young physicians to practice in needy areas has been the subject of various committees of the association. At the 1969 Annual Meeting, OSMA's Legislative Committee introduced a resolution (subsequently adopted by the House of Delegates) asking for the appointment of a special committee to study a "Rural Medical Scholarship Program."

This year, the Planning Committee recommended to the Board of Trustees (subsequently adopted) that a special Council be appointed to study the shortage of medical manpower in rural Oklahoma. The association's Appropriation and Audit Committee suggested at the last Annual Meeting that we consider discontinuing the scholarship program in favor of loans.

Your committee has discussed our Financial Aid to Education Program with school officials and they agree that the character of the program could be changed with little effect on the university.

Legislative leaders for Governor Bartlett were successful in passing legislation during the previous session establishing an "Oklahoma Rural Medical Education Loan and Scholarship Fund," creating a Board of Trustees and appropriating \$25,000 for first year funding. The objective of the fund is to finance medical education for students willing to sign an agreement to practice in communities of 5,000 or less after graduation and training. The trustees will be authorized to grant loans of up to \$5,000 per year and to forgive two years of the loan for each year of practice. The Board will have funds to start five students in the 1970-71 academic year. (The Board has been appointed by the Governor and all are members of OSMA.) Each year the legislature will have to appropriate funds to finance new students and maintain loans for students previously enrolled. Even-

tually, this fund will grow from \$100,000 to \$124,000, financing approximately 25 students.

The committee feels this is a progressive step and certain to help alleviate our manpower shortages. However, there are other areas that need physicians, particularly our metropolitan centers in neighborhoods of low income and high density. In an effort to produce manpower for these and other needy areas, the committee feels OSMA funds for loans and scholarships could be better utilized and that a program similar to that passed by the legislature should be adopted. Five dollars from each OSMA dues paying member is transferred to the loan and scholarship fund. This amounts to about \$9,500 a year. The \$46,000 in outstanding loans will be returning to the association as the students who received the loans begin practicing. Thus, OSMA has the \$9,500 plus whatever amount is returned in payments each year to put in a loan program, should the House of Delegates elect to do so. In order for the OSMA fund to be competitive with the state fund, it would have to have similar characteristics, however, as stated earlier, the committee feels that the managers of the fund should have the latitude of making loans to students who will agree to practice in needy areas and not limit it to just rural areas. In addition, the committee feels that funds outside the membership might be forthcoming provided OSMA had the proper vehicle for solicitation. Communities seeking physicians, individuals interested in medicine and manufacturers of medical products might be inclined to give funds to a foundation for education and research while not willing to give money to OSMA.

#### *Recommendations:*

1. That the House of Delegates authorize this Committee to change the character of its loan and scholarship program by eliminating scholarships and by utilizing existing and future funds for loans similar to the state program.

2. That the House of Delegates authorize this committee to study the establishment of a foundation for research and education with OSMA legal counsel and delegate to the Board of Trustees the authority to establish such a foundation if proven feasible.

3. That the House of Delegates authorize the Board of Trustees to

transfer the loan and scholarship funds to the foundation if it is established.

#### Report of the COMMITTEE ON PLANNING (APPROVED)

##### *Committee Members*

Scott Hendren, M.D., Oklahoma City,  
Chairman

Hillard E. Denyer, M.D., Bartlesville

Ed L. Calhoun, M.D., Beaver

C. Riley Strong, M.D., El Reno

Beverly C. Chatham, M.D., Chickasha

Mrs. J. Hartwell Dunn, Oklahoma City

Clayton E. Woodard, M.D., Tulsa

Hayden H. Donahue, M.D., Norman

Rex E. Kenyon, M.D., Oklahoma City

Irwin H. Brown, M.D., Okla. City

Orange M. Welborn, M.D., Ada

##### SECTION I

##### *BUILDING EXPANSION*

At the 1968 House of Delegates annual meeting, Delegates authorized an expansion of the OSMA headquarters building and authorized the Board of Trustees to carry out the program. On November 17, 1968, based on a report from the Committee on Planning, the Delegates approved additional expenditures for construction due to rising costs of materials and services, authorized the addition of a basement to be paid out of association reserve funds, and approved the solicitation of voluntary contributions to offset the depletion of reserves.

To expedite the day-to-day handling of construction problems, the Board of Trustees on July 28, 1968 delegated to the Committee on Planning the responsibility for the building expansion project, subject to final authority of the Board. On March 9, 1969, the Board approved a report from the Committee on Planning to accept a low bid of \$83,328 (J. W. Skaggs Co.) plus an approximate cost of \$10,000 for the basement addition, for a general total cost of \$93,328. In addition, the Board approved the committee's recommendation that association reserves not be depleted below \$20,000. A \$50,000 loan at 7¼% was obtained from the Local Federal Savings and Loan Association . . . the balance of costs to be financed from reserves and from voluntary contributions. A five-year lease, at \$4,200 annually, was negotiated with the Oklahoma County Medical Society for office space.

On August 9, 1969, the Board of



Trustees approved the formation of a "Century Club" for those physicians who wished to contribute \$100 or more to the building program, and also authorized a program whereby other physicians desiring to do so could contribute separately to finishing and furnishing a portion of the basement into a lounge area.

The Board of Trustees, on October 24, 1969, authorized the Committee on Planning to replace certain furniture and equipment items from operating funds (as distinct from funds designated for the new portions of the building). Further, at the same meeting, the Board delegated to Doctors Scott Hendren and Rex Kenyon the authority to develop the basement area in keeping with funds available through the special contributions.

Voluntary contributions were most gratifying and illustrate the generalized support of the membership for the OSMA. Total contributions for the building expansion project were \$25,551.81, including 112 members who contributed \$100 or more and thereby qualified for the Century Club. Also included in the above total is a \$2,000 contribution from the Woman's Auxiliary to the OSMA and \$100 from the Oklahoma Chapter of the American Association of Medical Assistants.

The special basement fund attracted \$5,925.00 in addition to the contributions mentioned above.

OSMA's records reflected surplus funds of \$62,837.00 prior to launching the building project.

Expenditures chargeable to the building expansion are broken down as follows:

<i>Expenditures</i>	
Construction Cost	\$93,973.00
Architect	5,100.00
Loan Cost	625.00
Carpeting	3,962.26
Furniture	6,083.00
Drapes	803.86
	\$110,547.12
<i>Payments</i>	
Loan	\$50,000.00
Surplus Funds	34,995.31
Contributions	25,551.81
	\$110,547.12

The committee is pleased to report that generous contributions enabled them to carry out the building program and still retain \$27,841.69 in surplus.

Regarding the basement lounge

area, the following financial report is presented:

Contributions	\$5,925.00
<i>Expenditures:</i>	
Construction Cost	\$4,680.30
Furnishings	1,010.43
	\$5,690.73
Balance	\$ 234.27

Regarding other building matters, on recommendation of the committee, the Board of Trustees has designated the north central conference room as the "Auxiliary Room." The remaining two conference rooms will simply be designated as "A" and "B" until more suitable names may come to light.

Your committee is proud of the expanded association building and encourages all association members who have not done so to visit it soon. Not only is it one of the most beautiful association headquarters in Oklahoma, but it is functional and should meet the needs of Oklahoma Medicine for years to come.

The cooperation of the House of Delegates and Board of Trustees throughout the entire project are warmly appreciated by the committee. A special note of thanks is extended to the substantial number of our members who made voluntary contributions. We are also grateful to the J. W. Skaggs Company for the quality of workmanship and to the Architects, Nusbaum and Thomas, who not only added the new space without disturbing the aesthetics of the original structure, but also tailored their fee to original cost estimates.

#### *Recommendations:*

1. To complete the building program and achieve a first-class headquarters in every respect, some additional renovation will be needed in the older section of the building, parking lot resurfacing will soon be necessary, and a few items of furniture must be added. It is recommended, therefore, that the succeeding Committee on Planning work with the Board of Trustees on these matters during the coming year.

### SECTION II "PROGRAM FOR A UNIFIED PROFESSION"

At the suggestion of President Dwyer, and in keeping with one of his major projects for the year, the committee participated in the development of a June 29th meeting with representatives of all special interest medical societies. The objectives

of the meeting were to seek the advice of these groups on OSMA operations, to receive new ideas where the OSMA could be more useful to the special-interest groups, and to generally strengthen two-way communications to avert fragmentation in medicine.

After receiving the counsel of four discussion groups at the June 29th meeting, your committee took the following actions:

1. Recommended to the Board of Trustees that an Advisory Panel of special-interest medical society representatives be created for the purpose of providing two-way liaison with the OSMA councils, committees, officers and policy-making bodies. The panel, to be appointed annually by the groups themselves, will be integrated into appropriate OSA deliberations at the prerogative of the state association president.

2. Recommended that the state association provide staff service to interested special-interest medical societies on a time-cost basis so as to be fully self-supporting.

3. Recommended that the OSMA continue to work with the special-interest societies in developing the annual meeting scientific program.

4. Recommended that the President of the OSMA, at his discretion, consider convening the special-interest Advisory Panel on an annual basis to share views regarding such topics as governmental relations, legislation, and long-range planning on problems and projects of mutual interest.

#### *Recommendation:*

1. It is recommended that the special-interest Advisory Panel be reappointed at the beginning of the next fiscal year and that its purposes and activities be continually studied and refined.

### SECTION III REPORT OF AMA COMMITTEE ON PLANNING AND DEVELOPMENT

At the 1969 Clinical Convention of the AMA House of Delegates, the AMA Committee on Planning and Development submitted a 60-page report containing 18 groups of recommendations (57 individual recommendations) designed to update the AMA's stance and its organization in light of dynamically changing times.

To say the report was controversial is an understatement. The majority report was accompanied by a six-



page minority report presented by John H. Budd, M.D., Ohio. Doctor Budd itemized objections to the report, and had this to say (in part) regarding the general tenor of the report:

"... I am deeply concerned with the Committee Report in its present form. Many of the viewpoints expressed and the recommendations advanced differ, sometimes sharply, from my own and from what I consider to be the sentiments of the House of Delegates ...

"... Some of its proposals would lead, if adopted, to far-reaching and epochal changes in the philosophy, policy, responsibility, scope of activity and commitment of the AMA ...

"... I also find ... the basic tone unacceptable ... notably the air of apology and self-denunciation which pervades some of the report ..."

The AMA House of Delegates took only minor action ... to set up a permanent Committee on Long Range Planning and Development, to appoint an ad hoc committee to serve in the interim, and to solicit commentary from the component state and county societies prior to taking further action on the report at the 1970 annual AMA meeting to be held in Chicago in June.

The OSMA Board of Trustees asked President Denyer to assign this matter to an appropriate state association committee for review, and he selected the OSMA Committee on Planning.

Your committee has studied the AMA report in some depth and generally supports the views expressed by Doctor Budd. While some of the observations contained in the AMA report may be realistic, and practical, others are not, and fault was found with many of the recommendations. In general, your committee believes the AMA report will have to be totally rewritten if it is to represent the views of OSMA and medical societies elsewhere.

A resolution for introduction at the next AMA House of Delegates meeting was prepared and is attached to the back of this report.

#### *Recommendation:*

1. It is recommended that the resolution regarding the Report of the AMA Committee on Planning and Development be introduced in the name of the Oklahoma Delegation at

the 1970 annual meeting of the AMA House of Delegates.

### **SECTION IV ASSISTANCE TO RURAL PHYSICIANS**

The chairman of the committee, Doctor Hendren, has observed the growing number of Oklahoma physicians who volunteer for periods of practice in underprivileged foreign countries. He has also observed that there are presently over 50 Oklahoma communities with only one medical doctor, and these gentlemen are not only physically oppressed by their practice situations, but also find it difficult if not impossible to find relief to attend educational refresher courses so vital in the present era of medical advancements.

He has proposed, and your committee concurs, that the Committee on Planning work with the Board of Trustees in establishing a program whereby physicians from metropolitan cities can volunteer to relieve rural physicians for periods of two to three weeks in order that they may take educational sabbaticals. It is envisioned that the Postgraduate Education Department at the OU Medical Center could "tailor-make" courses to meet the needs of individual practitioners so relieved of their practice responsibilities. However, training opportunities should not be restricted to Oklahoma facilities. It is further envisioned that a foundation be created, if justified by further study, under which the program would operate, and that adequate living quarters for the physician volunteering for rural relief work might be solved through the purchase of a travel trailer.

#### *Recommendation:*

1. It is recommended that the House of Delegates authorize the Board of Trustees to take action on a specific plan of implementation to be developed by the Committee on Planning.

### **SECTION V MISCELLANEOUS**

The preceding sections represent areas of primary activity undertaken by your committee during the past year. There were other activities, however, and in the interest of brevity, they are briefly mentioned below.

1. *Rural Medical Council:* Your committee recommended to the Board of Trustees that a Rural Medical Council be created for the purpose of relieving doctor shortages in

sparsely settled parts of the state (including deprived areas in metropolitan centers, if necessary). This was accomplished. (See Rural Medical Council Report)

2. *AMA Resolutions:* Your committee, at the request of President Denyer, assisted in drafting six resolutions introduced at the 1969 AMA clinical convention. These resolutions, the largest number from any state association, dealt primarily with government health care programs and public relations; they were generally dealt with favorably at the national level and, hopefully, contributed toward the improvement of medicine's position.

3. *Program Development:* Your committee has offered its services to each year's incoming OSMA president to assist in program and priority development.

4. *SAMA Banquet:* Your committee has expressed concern to the Medical School Liaison Committee regarding the value of the annual banquet for the OU Chapter of the Student American Medical Association (cost over \$3,000 last year) and has suggested a re-direction of this commitment toward more fruitful SAMA activities.

Introduced by: Oklahoma Delegation Resolution No.

Subject: Report of the Committee on Planning and Development

Referred to:

WHEREAS, the AMA Committee on Planning and Development has worked since 1968 in its subject area preparing a comprehensive document which appraises external developments and formulates a variety of recommendations to meet current and anticipated challenges; and

WHEREAS, the committee may be commended for a substantial and well-intentioned effort, much of the material in the report which serves as the basis for analysis, appraisal and conclusion — as well as many of the recommendations contained therein—may be more reflective of the political climate than of the real concerns of a responsible citizenry;

NOW, THEREFORE, BE IT RESOLVED, that the following comments and amendments be adopted with specific respect to the report's recommendations:

1. Amend the recommendation on page 3 by striking the words "or the source of payment," by placing



the word "or" before the word "ability," and by placing a period after the word "services" on line 50.

2. Amend the corollary statement, lines 4 through 6 on page 4, by striking the entire statement because it is unnecessary.

3. Amend the recommendation on page 5 by deleting the first paragraph, lines 20 through 22.

4. Amend the recommendation on page 6 by adding the following statement: "This definition of total health, while a desirable goal, extends in many respects beyond the control of physicians."

5. Amend the recommendation on page 7 by striking it in its entirety on the grounds that the AMA should neither endorse nor take the initiative in developing *all* plans regardless of their merit.

6. Regarding the recommendations on page 14, lines 3 through 36, the principle may be acceptable but implementation on the scale envisioned would prove to be difficult or impossible in smaller state and county medical societies.

7. Regarding the recommendations on page 15, lines 18 through 37, amend by re-designating recommendation (3) as (4) and by inserting a new recommendation (3) as follows:

(3) There are also growing socioeconomic forces which are taxing the total time available for patient care, and as a result, too many physicians are being driven toward research, education and administrative employment in government and industry.

8. Amend the recommendations on page 16 (lines 51-55) and page 17 (lines 1-9) by adding a new paragraph (4), as follows:

(4) Special and primary emphasis should be placed on directing prospective doctors' assistants into recognized ancillary professions, rather than creating new health disciplines and study should be given toward expanding the functions of recognized ancillary professions through special training.

9. Amend recommendations (1) and (3) on page 20 (lines 3-6 and 14-18) by striking recommendation (1) and by amending recommendation (3) to add the phrase "socio-economic factors" after the

word "culture" in line 15 and by changing the word "may" in line 16 to "will."

10. The intent of the recommendations on page 22 appear laudable, but it is not clear whether the AMA intends to furnish computer service and staff assistance to help gather data; if not, the smaller state associations are for the most part not equipped nor staffed to assume the research responsibility.

11. Amend recommendation (1) on page 23, lines 43 through 45 to read as follows:

(1) That the AMA urge state and county medical societies to assume the functions of monitoring fees and containing those elements of health care costs which are controllable by physicians.

12. Regarding the recommendations contained on page 25 (lines 50-53) and page 26 (lines 1-17), references to in-office audits should be deleted except as they apply to voluntary self-evaluation programs and except as they apply to legal clarification, especially with respect to government audits. The responsibility of medicine for peer review should be re-endorsed, and voluntary life-long postgraduate study should be encouraged (as exemplified by the long-standing program of the American Academy of General Practice).

13. Recommendations (1) through (3), on pages 27 and 28 are recommended for adoption.

14. Regarding the three recommendations on page 30, the importance of physician-hospital relationships is well-recognized, as is the problem of obtaining unbiased data. However, most smaller state and county medical societies do not have adequate staff to perform this and other research functions recommended in the report. A larger scale sampling by the AMA, through direct questionnaires to physicians, would be a more appropriate and practical mechanism.

Therefore, the three recommendations should be stricken in favor of the following:

(1) That the association take primary responsibility to conduct a large-scale national sampling of physicians, state-by-state, to determine problems and accomplishments in physician-hospital relationships;

(2) That well-designed questionnaires be distributed through state associations for mailing, to be returned to the AMA for analysis and recommended guidelines designed to assist state and local societies toward improved physician-hospital relationships.

15. The recommendations on page 34, lines 3 through 29, are recommended for adoption.

16. The recommendations on page 35 (lines 46-51) and page 36 (lines 1-13) should be deleted from the report on grounds that they are unrealistic and impractical. The "Health Bill of Rights" will serve no useful purpose and it promotes the illusion that services must be provided irrespective of the ability or need to deliver them.

17. The adoption of recommendations contained on page 38 (lines 41-50) and page 39 (lines 1-5) are encouraged.

18. Regarding the recommendations contained on page 52 (lines 51-55) and page 53 (lines 1-22) it is recommended to strike items (1), (2) and (3) until item (4) is accomplished.

19. The recommendation to form a "National Academy of the Health Professions for Research and Policy" should be abandoned in the concept in which it is established in the report. It would be unwise to formalize a partnership with all of the groups named in the editorial commentary. The disadvantages outlined on page 59 are considerably more valid than the enumerated advantages which follow. Physicians are confused enough about their sense of direction without creating another policy-making national organization, and the Academy would be doomed from the beginning if each group maintained its own policy-making authority independently of the collective group. AMA relations with related health care groups should be strengthened without sacrificing autonomy and without entering into a formal relationship which could well promote divisiveness rather than cure it.

BE IT FURTHER RESOLVED, that the editorial content of the report of the AMA Committee on Planning and Development be re-written to reflect the foregoing amendments and commentary, and that no final action be taken on the report until the



1970 clinical convention of the AMA House of Delegates.

Report of the  
CONSTITUTION AND BYLAWS  
COMMITTEE  
(APPROVED)

*Committee Members*

George H. Garrison, M.D., Okla. City, Chairman.

E. K. Norfleet, M.D., Tulsa  
Clinton Gallaher, M.D., Shawnee  
Paul H. Rempel, M.D., Enid  
Arnold G. Nelson, M.D., Midwest City  
Maxwell A. Johnson, M.D., Tulsa

OSMA bylaws require that the Constitution and Bylaws Committee shall consider amendments proposed by members of the association or by component societies, and shall present them with its recommendations to the House of Delegates for consideration.

It came to your committee's attention that the Tulsa County Society had adopted a resolution for presentation to the House of Delegates calling for an amendment to the bylaws that would provide hospital residents with junior membership status in the association. (This is Resolution No. 3, which is enclosed in your information packet.)

When the resolution was received in the OSMA office, the proposed amendment was carefully checked by the association executive staff and is technically correct. It will accomplish its purpose without further amendments to the bylaws.

The proposed amendment was circulated by mail to all members of your Constitution and Bylaws Committee and it is the committee's recommendation that the amendment "Do Pass." The vote of the committee was as follows: four favoring "Do Pass," one favoring "No Recommendation," and one favoring a "Fail" recommendation.

*Recommendations:*

1. In view of the mail ballot, it is your committee's recommendation that the proposed amendment to the bylaws be adopted.

Report of the  
COUNCIL ON PUBLIC POLICY  
(APPROVED AS AMENDED)

*Council Members*

Rex E. Kenyon, M.D., Okla. City, Chairman

Tom S. Gafford, M.D., Muskogee  
Lloyd E. Rader, Jr., M.D., Okla. City  
Floyd T. Hubbard, M.D., Henryetta  
Thomas C. Points, M.D., Okla. City  
Stephen J. Adelson, M.D., Tulsa

Walter Gary, M.D., Tulsa  
James W. Owen, M.D., Bartlesville  
Frank W. Clark, M.D., Ardmore  
F. D. Kalbfleisch, M.D., Lawton  
Harlan Thomas, M.D., Tulsa  
James B. Eskridge, III, M.D., Okla. City

M. H. Newman, M.D., Shattuck  
Powell E. Fry, M.D., Stillwater  
James B. Wise, M.D., Okla. City  
Mrs. Harlan Thomas, Tulsa

*Medical Heritage Committee*

George H. Garrison, M.D., Okla. City, Chairman

R. Palmer Howard, M.D. (and Mrs.) Okla. City

Wayne A. Starkey, M.D. (and Mrs.), Altus

J. F. York, M.D. (and Mrs.), Madill

William R. Paschal, M.D. (and Mrs.) Oklahoma City

E. C. Mohler, M.D. (and Mrs.), Ponca City

Carl J. Hotz, M.D. (and Mrs.), Tulsa

Joe L. Duer, M.D., Woodward

Clinton Gallaher, M.D. (and Mrs.), Shawnee

B. E. Blevins, M.D., Enid

Forrest S. Etter, M.D., Bartlesville

E. F. Stephens, M.D., Centralia, Ill.

*Public Relations Committee*

James B. Eskridge, III, M.D., Okla. City, Chairman

Lynwood Heaver, M.D., Tulsa

Jake Jones, M.D., Shawnee

W. C. McCurdy, M.D., Purcell

F. C. Wallingford, M.D., Bartlesville

Wm. E. Price, M.D., Oklahoma City

Donald R. Resler, M.D., Okla. City

M. Joe Crosthwait, M.D., Midwest City

James V. Miller, M.D., Ardmore

J. A. LaCroix, M.D., Hugo

Robert M. Shepard, M.D., Tulsa

Ralph C. Emmott, M.D., Bartlesville

*Committee on Laboratory Quality*

Raymond F. Hain, M.D., Okla. City, Chairman

A. Standley Porter, M.D., Okla. City

Norman A. Cotner, M.D., Grove

John L. Hackney, M.D., Edmond

James F. Todd, M.D., El Reno

Dale E. VanWormer, M.D., Tulsa

F. R. Hassler, M.D., Okla. City

Paul A. Leap, M.D., Enid

Jerold D. Kethley, M.D., Shawnee

*State Legislative Committee*

R. Barton Carl, M.D., Okla. City, Chairman

Donald R. Resler, M.D., Oklahoma City

Hayden H. Donahue, M.D., Norman

Stephen J. Adelson, M.D., Tulsa

J. B. Snow, M.D., Oklahoma City

E. K. Norfleet, M.D., Tulsa

Royce C. McDougal, M.D., Holdenville

W. P. Jolly, M.D., Lawton

A. B. Colyar, M.D., Okla. City

Bertha M. Levy, M.D., Okla. City

Harlan Thomas, M.D., Tulsa

E. M. Farris, M.D., Oklahoma City

C. Riley Strong, M.D., El Reno

Edgar W. Young, Jr., M.D., El Reno

Hugh Perry, Jr., M.D., Tulsa

James A. Cox, Jr., M.D., Okla. City

David M. Selby, M.D., Enid

Richard Mayeux, Oklahoma City (ex-officio)

Richard D. Stansberry, M.D., Okla. City

Albert J. Glass, M.D., Okla. City

Nolen L. Armstrong, M.D., Oklahoma City

Leon D. Combs, M.D., Shawnee

Robert J. Hogue, M.D., Guthrie

Karl K. Boatman, M.D., Okla. City

Mrs. Samuel R. Turner, Tulsa

Frank J. Martin, M.D., Ada

Marion C. Wagon, M.D., Midwest City

SECTION I  
THE COUNCIL

The overlapping responsibilities of the Planning Committee, the Governmental Relations Committee and the State Legislative Committee now cover most of the former functions of the Council on Public Policy. We are charged with the responsibility of "watch-dogging" Federal legislation and acting in response to the requests of our parent organization, the American Medical Association. This year, while the usual magnitude of health oriented legislation has been considered by the Congress, we have not received specific requests for action; so this has been a year of relative inactivity.

The Council has continued to survey Federal legislation as it might affect the practice of medicine and related fields. We have, moreover, been appraised of the action of the AMA's Council on Legislation and have studied the various testimonies presented by AMA representatives before appropriate House and Senate committees. A brief review of the more important legislative proposals seems pertinent for the information of the House. Perhaps the most important legislative matter centers about the amendments to the Social Security Act, particularly Titles V, XVIII and XIX, which pertain to medical services. Briefly, these amendments would alter depreciation



schedules and capital expenditures of hospitals, extended care facilities and nursing homes as they might affect cost accounting for the purpose of reimbursement under Medicare and Medicaid. Expansion and additions would if this proposal passes, place more responsibility on comprehensive health planning agencies for approval. Alteration in utilization review functions in hospitals has been suggested which would require random inspection of admissions and more severe penalties in the form of disallowance of reimbursements where hospital admission was not considered essential to the welfare of the patient. With regard to physicians, the proposals would reduce payment to the 75 percentile from the present 83 percentile, and would freeze physician fees at the present level for the following year. Subsequent allowable increases in physicians' fees would be based upon a special cost-of-living index, minus that portion which is directly attributable to health care cost. The proposals would further require the secretary of HEW to compile a list of all physicians who derived \$10,000 or more annual income from any of the programs or a combination thereof; and this list would be reported to the Congress. Representatives of the AMA have appeared before appropriate committees and generally opposed these provisions.

This House of Delegates would be most interested in a legislative proposal to provide grants for teaching institutions who wish to set up Departments of Family Medicine. This proposal has been favored by the AMA. A proposal to develop an institute for gastrointestinal disorders has been opposed by the AMA Council on Legislation. A proposal to expand the functions of Regional Medical Programs to include "other related diseases," and to provide for therapy of heart, cancer, stroke, and other related diseases has been opposed by AMA on the basis that this is a limited educational program which should remain limited to the three principal disease entities and to education, rather than therapy.

Many and varied bills have been introduced regarding environmental pollution; and these have been favored by the AMA.

Bills dealing with labeling of pre-

scription drugs with name and dosage have been approved by the AMA on the basis of safety.

While there has been no action in Congress during the current session on the subject of compulsory national health insurance, this House of Delegates should be alerted to the fact that numerous proposals will be considered during the coming months. Representative Martha Griffiths (D-Michigan) has introduced a proposal, which parallels that of the AFL-CIO, calling for extension of Medicare benefits to all segments of the population, and expanding same to include certain segments of dental care, eyeglasses and prescription drugs. Physician payments would be made on a capitation basis, similar to that employed by the National Health Service in Great Britain and payments would be made only to "primary physicians" or "family physicians." Payments would be sufficient for them to "employ" the services of a needed specialist as the need arises.

A proposal by Mr. Walter Reuther's committee of 100 is even more far reaching than that which has already been introduced by Representative Griffiths. In addition to expanding the benefits, it would call for "federal standards of health care, federal licensure, federal fee structuring, etc." Senator Edward Kennedy (D-Massachusetts) is proposing a graduated program of nationalized health care beginning in 1971 with all youngsters of school age, and adding an additional decade of citizens each successive year until the entire population is covered.

The AMA's "Medicredit" proposal seeks to counteract some of these more liberal proposals for nationalized health care by providing for income tax credits for the purchase of private health insurance. The amount of credit would be based on the individual's tax liability on a percentage ratio. Indigents would receive vouchers from the Federal government for purchase of private health insurance. The Fulton Fannon proposal is a similar approach based upon adjusted gross income rather than tax liability. Representative Durward Hall (R-Missouri) will submit a proposal transferring the present Medicare and Medicaid programs to private insurance carriers and would further provide for catastrophic insurance wherein an individual's medical expenses would be paid

when they exceed a given percentage of his income.

Only one of these proposals (that of Representative Griffiths) has been introduced in the form of a bill at the present time. We are assured that little, if any, consideration will be given to these highly controversial issues during the current session of Congress, since the House Ways and Means Committee is already overburdened with hearings, particularly as they relate to the Social Security amendments.

The Council did organize and implement a successful legislative contact tour to Washington during the first week of March. Following a two day workshop on legislative and political affairs presented by the AMA's Division of Public Affairs and the American Political Action Committee, we breakfasted with our Congressional Delegation in the Speaker's Dining Room. Many current issues were discussed with our electorate, and we were given the opportunity to express our resentment over allegations of physician abuse of the Medicare and Medicaid programs as they were suggested in the Staff Report to the Senate Finance Committee.

#### *Recommendations:*

1. The Council has no specific recommendations regarding its organizational function or duties. It is well aware that the problems of national compulsory health insurance may well call for a marked increase of activity during the coming year.

2. Several years ago the OSMA House of Delegates directed this Council to organize and implement an annual legislative contact tour to Washington, but no specific funds were allocated for this purpose. It is becoming increasingly difficult to enlist volunteers for this project. Since AMPAC does offer at least partial reimbursement for travel to their workshop, we have combined our tour with the workshop, thereby enabling some portion of travel expenses to be paid. We have also utilized small portions of the budget of the Council on Public Policy. Should, however, there arise a need for a greater promotional campaign or greater activity as a result of impending compulsory health insurance, this Council's limited budget could not include an expenditure for the purpose of a legislative contact tour. We feel this is an important function of the OSMA,



inasmuch as it gives us an annual opportunity to meet with our electorate and discuss the problems and proposals of Medicine. We would recommend, therefore, that the budget of the Council on Public Policy be increased to cover a portion of the expenses incurred by those physicians and wives who volunteer for this project; and we further recommend that if no such allocation is feasible at this time, the action of the house requiring a Congressional contact tour be rescinded.

## SECTION II

### MEDICAL HERITAGE COMMITTEE

Your Medical Heritage Committee has been relatively inactive during the past year. Inactivity was not from a lack of interest, but a lack of space available for storage, preparation and display of articles, equipment, manuscripts, etc.

The completion of the OSMA Executive Office Building expansion has now given us storage space for use in the future. This storage space was offered for our use by the OSMA Board of Trustees and the Committee will now begin to gather up the artifacts that have previously been stored in private homes, etc.

#### *Recommendations:*

1. It is recommended that the Medical Heritage Committee be continued with the ultimate purpose of having a "medical history in Oklahoma" display located in some appropriate place.

2. It is further recommended that the OSMA House of Delegates urge and encourage all Oklahoma physicians to seek out and preserve, as best they can, the artifacts and manuscripts that best depict the medical history of this state.

## SECTION III

### PUBLIC RELATIONS COMMITTEE

During the past year your Public Relations Committee has continued or undertaken several different projects. Activities have been as follows:

1. The association's six year old weekly health column, "A Message From Your Doctor," continues to be carried by about 40 state newspapers each week. This year your committee changed the format of the health column from that of a health feature article to a question and answer.

The amount of newspaper space devoted to the health column each year would cost the association approximately \$25,000 if it had to be pur-

chased. The column is produced solely by the OSMA staff.

2. The *OSMA News*, your association's monthly newsletter, is now in its fourth year of publication. It is a six page newsletter published nine months each year beginning in September and ending the following May. The newsletter is devoted to socio-economic news of interest to the physician and members of his household and is mailed directly to the member-physician's home.

3. Radio stations in Oklahoma received the interest of the association during the past year. Periodically series of public service announcements were distributed to all radio stations in the state. The announcements were prepared in the association office and dealt with current health topics and health reminders of interest to the general public.

4. In cooperation with the OSMA Legislative Committee's "Legislative Doctor of the Day" program, a story was produced for each participating physician's hometown newspaper. The stories were released the week prior to the physician's day of service. The story served a two-fold purpose by (a) informing the doctor's patients that he would be out of his office on a certain day, and (b) creating a good public relations image for the association. Fifty-seven such stories were produced and mailed during the legislative session.

5. Physician-speakers representing the OSMA Speakers Bureau, filled 38 speaking engagements during the past year. The bureau was created in late 1967 and currently has 40 physician-speakers participating in it. (It is interesting to note that 22 of the 38 talks given during the past year were on the subject of drug abuse.)

6. In cooperation with the OSMA Medical School Liaison Committee, your Public Relations Committee conducted a seminar on the Business Side of Medical Practice for interns, residents and medical students at the O.U. School of Medicine. The seminar took one-half day each on November 2nd and 9th and covered such topics as personal and business insurance, government medical programs, malpractice prevention and the ins and outs of starting a medical practice. Approximately 30 students, interns and/or residents attended each session.

7. During the past year the OSMA

again participated in the promotion of National Community Health Week in cooperation with the AMA. The week was set for October 19 through 25 and program emphasis was on health careers. The promotion consisted of special radio spot announcements, television spot announcements, newspaper feature articles, news stories and newspaper ads. The newspaper ads were distributed to each county medical society PR Chairman for presentation to local newspapers.

8. In early December a PR campaign on the reporting of child abuse was conducted by your association. All physicians in the state were contacted by letter from Hillard E. Denyer, M.D., OSMA President, and reminded that child abuse is becoming an all too familiar phenomena. The law on the reporting of child abuse was outlined to the membership and they were given a check list for detection of possible abuse. All of this information was mailed directly to the physician and this was then followed up with a news story to all newspapers in the state. The story pointed out that the physicians would be looking for child abuse and, also, gave instructions as to how known abuse could be reported to the appropriate agency. The story received exceptional use.

9. Your Public Relations Committee joined with the OSMA Committee on Immunization to publicize the "Rub Out Rubella" campaign conducted in Oklahoma on Sunday, February 1. The campaign was publicized by the association through special news releases to the mass media and by devoting several of the health column questions to Rubella.

10. Special projects have been undertaken throughout the past year, such as press conferences, reaction stories to news events, and working with newspaper writers or reporters in conceiving, researching and placing medical stories in major news media. In addition, your association has answered hundreds of telephone and written requests for information on health subjects. The executive office maintains an extensive file of catalogs on films and printed material to assist people seeking such information.

#### *Recommendations:*

1. It is your committee's recommendation that the OSMA again consider holding a seminar for medical students in cooperation with the



Medical School Liaison Committee. However, the seminar should be held near the end of the school year and should concentrate on medical-legal matters and medical ethics. The seminar can then be used by the medical students to prepare for their medical board examination in this area.

SECTION IV  
COMMITTEE ON LABORATORY  
QUALITY

For the past several years there has been considerable concern at various Government levels regarding the quality of medical laboratories including those of the physicians' offices and clinics. At the 1968 Annual Meeting of the OSMA, the Laboratory Quality Committee was created and authorized to develop programs to address themselves to this issue. A voluntary Laboratory Proficiency Testing Program for physician's offices and clinics, made available by the College of American Pathologists, was offered to Oklahoma physicians to evaluate the magnitude of this alleged problem and to consider programs to correct identifiable areas of unsatisfactory performance.

In 1969, twenty-five different physician groups representing 200 state doctors enrolled in the program. Quarterly check-specimens were provided each enrollee. Anonymous results of the tests were submitted to this committee for evaluation and for the determination of medically misleading results. The accompanying Table-1 represents an overview of these tests. A more complete description of the 1969 experience has been submitted for publication in the OSMA Journal.

The surveillance program revealed some interesting and important results:

- 1. Laboratory performance in the participating physician offices and clinics was much better than indicated by testimony presented to Senator Hart's committee in February, 1967. ("With perhaps a few exceptions, the worst of all laboratory work is done in the private doctor's office," stated Doctor Morris Schaeffer of the New York City Department of Health.)
- 2. Few office labs reported the more complicated laboratory procedures such as bacteriology or immunohematology. (See attached table-1)
- 3. A testing program with a followup education program has limited value. (Medically misleading results for each quarter were: 6.1% — Set 1, 3.9% — Set 2, 3.3% — Set 3, 10.3% — Set 4.)
- 4. While performance was excellent, there is room for improvement. (See table—2)

In preparation for the 1970 program, your committee conducted a survey of state physicians inquiring,

- 1. What lab tests were conducted in the physician's office
- 2. What tests should be included in an office testing program

Based on the results of this survey and the 1969 performance in Oklahoma, the College of American Pathologists designed a Proficiency Evaluation Program for Physician's offices nationwide. The program, less comprehensive than the 1969, but tailored to the physicians office laboratory has been offered to Oklahoma doctors at cost, \$75.00. Seventy-nine groups have enrolled, an increase of 316% over last year and representing 253 physicians. Oklahoma has the

proud distinction of having the largest percentage of its members enrolled in an office laboratory proficiency test program.

The committee, after reviewing the results of the 1969 program conducted a five hour seminar in Oklahoma City to aid participants in correcting those deficiencies pointed up in the testing.

Based on the results of the 1969 Testing program and the response to the 1970 P.E.P. program the committee recommends the following:

Recommendations:

- 1. That the Committee be continued and that it expand its follow-up educational programs.
- 2. Since this committee has essentially a public health function, we recommend that it be placed in the Council on Public Health rather than the Council on Public Policy.

SECTION V  
STATE LEGISLATIVE COMMITTEE

The 2nd session of the 32nd Oklahoma Legislature was one of the most medically oriented legislatures in recent years. Thirty-seven proposals required close scrutiny by this committee and many others had to be researched and followed with diligence.

State lawmakers, like national congressmen, are attempting with alarming regularity to solve the problems of medicine in legislative halls. The shortage of personnel, the concern over rising cost, inadequate distribution, and questions about the quality of care have precipitated an avalanche of statutory proposals. The long honored right to the "private practice" of medicine is constantly being challenged. Fortunately your committee, with the assistance of an

Table I

SUMMARY OF VALUES REPORTED BY OSMA  
MEMBERS PARTICIPATING IN 1969 COLLEGE OF  
AMERICAN PATHOLOGISTS PROFICIENCY TEST  
SURVEY

Constituent	Number Values Reported	Per Cent Good Performance	Per Cent Technically Unacceptable	Per Cent Medically Misleading
Glucose	180	79.4%	13.9%	6.7%
Calcium	28	67.9%	28.6%	14.3%
Bilirubin	128	75.8%	14.1%	1.6%
Cholesterol	168	82.7%	9.5%	1.8%
Urea Nitrogen	156	82.1%	10.3%	3.2%
Uric Acid	162	77.2%	14.8%	10.5%
Hemoglobin	178	82.3%	11.2%	2.2%
Bacteriology	23	26.1%	43.5%	43.5%
Urinalysis	84	85.7%	3.6%	2.4%
Immunohematology	52	76.9%	9.6%	7.7%
Infectious				
Mononucleosis	17	76.5%	23.5%	23.5%
GRAND TOTAL	1176	79.0%	12.7%	5.7%

Table II

SUMMARY OF VALUES REPORTED BY OKLAHOMA  
SMALL HOSPITALS PARTICIPATING IN 1969  
COLLEGE OF AMERICAN PATHOLOGISTS  
PROFICIENCY TEST SURVEY

Constituent	Number Values Reported	Per Cent Good Performance	Per Cent Technically Unacceptable	Per Cent Medically Misleading
Glucose	432	90.5%	5.3%	1.2%
Calcium	194	82.0%	8.2%	4.1%
Bilirubin	360	89.4%	6.4%	0.8%
Cholesterol	370	84.1%	9.5%	2.2%
Urea Nitrogen	415	91.3%	4.3%	0.5%
Uric Acid	352	92.3%	4.5%	2.0%
Hemoglobin	430	87.7%	4.9%	0.5%
Bacteriology	96	24.0%	33.3%	29.2%
Urinalysis	214	86.9%	4.2%	1.9%
Immunohematology	462	91.8%	5.0%	1.5%
Infectious				
Mononucleosis	41	90.2%	9.8%	9.8%
GRAND TOTAL	3366	87.2%	6.5%	2.3%



active Legislative Liaison Council has been able to thwart restrictive legislative attempts, and assist in the passage of positive proposals.

Again, as in previous years, the committee must thank the many members of the association who responded to our requests by writing, calling and visiting members of the legislature. This is the key to effective liaison with lawmakers. A personal contact by a constituent is far more impressive than the lobbying efforts of OSMA staff.

The "Doctor of the Day" program still proves to be an excellent activity for maintaining good rapport at the State Capitol.

The results of OMPAC's contributions to candidates for state offices were obvious during the 2nd Session. Members of both the House and Senate consistently consulted the association on medical bills. While OMPAC's contributions are in no way connected with this committee, they do indicate to lawmakers that medicine's interest in government affairs goes beyond specific medical legislation. The committee recommends to OSMA members the continued support of the Oklahoma Medical Political Action Committee.

Your committee prepared testimony for legislative committees on many occasions, provided information of a medical nature on many others, always trying to be objective, but by the same token always being adamant when the interest of good medical care was being jeopardized.

Association members should be aware that the vested interests of some organized practitioners is a constant threat in Oklahoma, as it is in many other states. The expansion of practice rights holds great economic benefits for these unqualified practitioners, and their lobbying efforts are both fulltime and effective. "Freedom of choice" is a cherished principle among members of government, and unfortunately knowledge of the capabilities of all "members of the healing arts," is not complete by all members of the legislature. The so-called "Insurance equality bills" would require payment for all licensed practitioners' services under all health and accident policies written in the state. The impact this expanded coverage would have on health insurance rates is obvious.

Interprofessional liaison has provided a temporary moratorium on legis-

lation to open the staffs of public funded hospitals to all licensed physicians and surgeons. It is unfortunate that professional medical organizations should feel compelled to seek recourse in the legislature for problems that should be resolved in mutual dialogue. The committee urges the appropriate OSMA committee to try and correct these problems before they become the subject of statutory attempts.

Cooperation with official state agencies and allied health organizations has prevented several open conflicts in the State House. The committee feels that all matters that deal with the health of Oklahomans can justifiably be reviewed by organized medicine and that the practicing physicians of the state will not let proper patient care be compromised by default. The committee appreciates the assistance of these organizations and pledges its continued objective participation in legislative affairs.

An informed and politically active membership is essential to an effective legislative program. Your committee has attempted to keep our members aware of state government actions by periodically publishing legislative reports in both the OSMA News and The Journal. In addition we publish weekly, during session, a report for 200 OSMA members who have a special contact with members of the legislature. We would like to re-emphasize the necessity of active physician and constituent society participation in the affairs of this committee.

By necessity, the legislative program of the association is reactionary rather than initiative. While the committee hopes to be more aggressive in the future by introducing legislation, it recognizes that once a bill becomes the property of 147 lawmakers that "Murphy's Law" might well prevail. The committee has met with association attorneys to study legislation that would ease the malpractice burden, however no practical solution was found. Again interprofessional liaison with the legal profession holds promise in this area. Legislation is being studied to restrict medical cultists in the state but there is little evidence that the legislature is overly concerned about this problem. The licensure of allied medical personnel groups is a perennial problem and one your committee has supported provided high standards are in-

corporated.

There have already been introduced over 15 interim study proposals affecting medicine, and though the session has adjourned, these proposals, and others sure to be introduced, will require our attention.

Following is a brief resume of bills the committee actively supported, opposed or observed. Also noted is our position and the outcome of the legislation. The committee will provide any member of the OSMA copies of these bills upon request.

HB 1020—Repeal of Psychologists Licensure Act

Observed—Died

HB 1143—Permits treatment by prayer or spiritual means in Workmen's Compensation cases

Opposed—Died

HB 1144—Medical panel for Industrial Court

Supported—Died

(The association established a panel on a voluntary basis—due to extreme and unjust criticism the association withdrew the panel)

HB 1150—Workmen's Compensation established a waiver right

Supported—Died

B 1022—Medical Laboratory Licensure Act

Supported—Died

HB 1203—Immunization Bill

Supported—Passed

HB 1357—Compulsory Practice Act

Opposed—Died

HB 1368—Exempts Diagnostic x-ray machines from Health Department control

Opposed—Died

HB 1410—Provides temporary hospitalization for mentally ill

Supported—Died

HJR 1033—Permits the formulation of hospital districts

Supported—Passed

SB 454—Permits introduction of books, etc. as evidence in civil cases

Opposed—Died

SB 468—Automatic hospital privileges to licensed physicians and surgeons

Opposed—Died

SB 518—Licensure of foreign medical graduates

Supported—Passed

SCR 43—Moratorium on drug legislation

Supported—Passed

SB 506—Licensure of hearing aid



- dealers and fitters  
Supported—Died
- SB 526—Amended Nurses Practice Act  
Observed—Died
- SB 561—Permits minor to consent to treatment for venereal disease  
Supported—Died
- SJR 35—Study need for additional physicians  
Observed—Passed
- SJR 42—Study of facilities for treatment of alcoholics  
Observed—Passed
- SJR 45—Study of Regional Health Centers  
Observed—Passed
- HCR 1038—Nurses Masters Degree Program at O.U.  
Supported—Passed
- SB 574—Workmen's Compensation — Permits selection of any practitioner of healing arts  
Opposed—Died
- SB 577—Established a Health Facilities Advisory Council and requires approval before construction of Health Facilities  
Opposed—Died
- SB 582—"Insurance Equality Bill"  
Opposed—Died
- HB 1702—Occupational Health Safety Standards Act  
Supported—Passed
- SB 612—Licensure of Medical Laboratory Personnel  
Opposed—Died
- SB 610—Workmen's Compensation — Restricted Impartial Medical Examiner  
Opposed—Died
- HB 1797—Establishes an Oklahoma Medical Education  
&  
HB 1798—Loan & Scholarship Fund and Administering Board  
Supported—Passed
- HB 1805—Amending Medical Examiners Act  
Supported—Passed

As the above report indicates the committee was successful in some efforts and unsuccessful in others, we wish to re-emphasize that with annual session and active interim committees, legislation is a constant concern. We must have the support of OSMA members in our legislative activities.

*Recommendations:*

1. That the committee be granted

continued authority to develop and present policy on behalf of OSMA to the Oklahoma Legislature.

2. That the committee be granted the authority to draft legislation on behalf of the OSMA in accordance with the policies set by the Board of Trustees and the House of Delegates.

Report of the  
COUNCIL ON PROFESSIONAL  
AND INTERVOCATIONAL  
RELATIONS  
(APPROVED AS AMENDED)

*Council Members*

Orange M. Welborn, M.D., Ada, Chairman  
R. Barton Carl, M.D., Oklahoma City  
James B. Silman, M.D., Norman  
Frank W. Clark, M.D., Ardmore  
E. H. Shuller, M.D., McAlester  
Rex M. Graham, M.D., Miami  
Joe L. Duer, M.D., Woodward  
Edwin Fair, M.D., Ponca City  
Jerold D. Kethley, M.D., Shawnee  
Richard D. Stansberry, M.D., Oklahoma City

James L. Haddock, M.D., Norman  
Lowell Templer, M.D., Altus  
William Simcoe, M.D., Tulsa  
Burdge F. Green, M.D., Stilwell  
E. D. Padberg, M.D., Ada

*Cults and Quackery Committee*

James B. Silman, M.D., Norman, Chairman

John E. Highland, M.D., Miami  
Floyd T. Hubbard, M.D., Henryetta  
William R. Coutant, M.D., Bartlesville

William R. Turnbow, M.D., Tulsa  
Sidney Traub, M.D., Oklahoma City  
Mrs. E. Cotter Murray, Oklahoma City

Kelly M. West, M.D., Oklahoma City  
Irwin H. Brown, M.D., Oklahoma City

Bailey L. Dietrich, M.D., Guymon  
M. Joe Crosthwait, M.D., Midwest City

William N. Harsha, M.D., Oklahoma City

David Carson, M.D., Fairland  
*Medical-Legal Relations Committee*  
R. Barton Carl, M.D., Oklahoma City, Chairman

Ollie W. Dehart, M.D., Vinita  
Richard G. Dotter, M.D., Oklahoma City

Edgar W. Young, Jr., M.D., El Reno

Thomas E. Acers, M.D., Oklahoma City

Joseph F. Messenbaugh, III, M.D., Oklahoma City

Walter E. Brown, M.D., Tulsa

Don W. Meinders, M.D., Pauls Valley  
Don Halverstadt, M.D., Oklahoma City

Marvin K. Margo, M.D., Oklahoma City

Marion C. Wagnon, M.D., Del City  
*Medicine and Religion Committee*

Edwin Fair, M.D., Ponca City, Chairman

Adolph N. Vammen, M.D., Tulsa

E. N. Lubin, M.D., Tulsa

Martin H. Andrews, M.D., Oklahoma City

Charles E. Green, M.D., Lawton

Mary Edna Sippel, M.D., Tulsa

Duane E. Brothers, M.D., Tulsa

Boyd K. Lester, M.D., Oklahoma City

E. C. Mohler, M.D., Ponca City

L. J. Starry, M.D., Oklahoma City

J. Hartwell Dunn, M.D., Oklahoma City

Allen E. Greer, M.D., Oklahoma City

Elvin M. Amen, M.D., Bartlesville

Donald F. Robinson, M.D., Norman

Frank H. Howard, M.D., Shawnee

Mrs. W. J. Williams, Bethany

*Committee on Nursing*

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C. S. Lewis, M.D., Tulsa

John P. Colmore, M.D., Oklahoma City

Norma L. Sneed, M.D., Checotah

Mrs. W. R. Cheatwood, Duncan

Frank H. Austin, M.D., Lawton

William R. Cheatwood, M.D., Duncan

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James L. Haddock, M.D., Norman

*Committee on Osteopathy*

Frank W. Clark, M.D., Ardmore, Chairman

Dale E. Van Wormer, M.D., Tulsa

E. L. Leonard, M.D., Wagoner

John A. Blaschke, M.D., Oklahoma City

Beryl D. Henwood, M.D., Collinsville

Charles W. Letcher, M.D., Miami

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E. E. Shircliff, M.D., Oklahoma City

H. A. Masters, M.D., Tahlequah

Mrs. A. T. Baker, Durant

*Committee on Pharmacy*

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Robert I. Lubin, M.D., Tulsa  
James F. Hammarsten, M.D., Oklahoma City

John R. Smithson, M.D., Dewey

H. L. Ratliff, M.D., Pawnee

Cecil Meares, M.D., Muskogee

Daniel M. Lane, M.D., Oklahoma City

SECTION I

THE COUNCIL

The purpose of your Council on



Professional and Intervocational Relations is to supervise liaison between your association and other professional and vocational organizations. There is one exception to this general statement and that is the Committee on Cults and Quackery.

During the past year the various committees of the council have continued their liaison activities with the members of the legal profession, clergymen, nurses, osteopaths and pharmacists. The council feels that specific committees in each of these areas are required to continue to develop a constant exchange of information and ideas. These committees also give the association an agency by which minor problem areas between and among medical groups and other professional organizations can be prevented from becoming major problems.

The Committee on Cults and Quackery serves as a watchdog over the activities of chiropractors and other cultists in the state. Its main function is to provide, when needed, information to the general public and the profession about the cultists and quacks.

A report from each committee and recommendations concerning that committee are included below.

SECTION II

CULTS AND QUACKERY  
COMMITTEE

During the past year the Committee on Cults and Quackery has continued to compile a document file on the practice of chiropractic in Oklahoma. The latest addition to the file is a commercial publication entitled *At Your Own Risk, The Case Against Chiropractic*.

Four hundred copies of this anti-chiropractic publication were ordered by your association for distribution to physicians and other opinion leaders. This book is another indication of the growing concern, outside of medicine, with the cult of chiropractic and the damage that it can do.

One of the claims that the chiropractors in Oklahoma had been making was that they were the second largest "health care providers" in the state. This claim called to your committee's attention the fact that no one knew for sure how many chiropractors were actually in active practice in the state. The OSMA staff was directed to contact each county society and ask for the number of chir-

opractors in their society area and their location by town. At the time of the writing of this report, 42 county societies had replied and reported the location of 214 chiropractors.

The following county societies did not reply: Caddo, East Central, and Garfield.

The following is a chart showing the number of chiropractors in each county medical society area:

Alfalfa-Woods	4
Atoka-Bryan-Coal	3
Beckham (Roger Mills)	5
Blaine	1
Canadian	0
Carter-Love-Marshall	4
Cleveland-McClain	5
Choctaw-Pushmataha	1
Comanche-Cotton	5
Cookson Hills	6
Craig-Delaware-Ottawa	3
Creek	7
Custer	5
Garvin	3
Grady	2
Greer-Harmon	2
Hughes-Seminole	3
Jackson	3
Jefferson	0
Kay-Noble	8
Kingfisher	1
Kiowa-Washita	3
LeFlore-Haskell	1
Lincoln	0
Logan	3
McCurtain	2
Murray	1
Northwest	8
Okfuskee	1
Oklahoma	52
Okmulgee	3
Osage	1
Payne-Pawnee	5
Pittsburg	3
Pontotoc	3
Pottawatomie	4
Rogers-Mayes	6
Stephens	5
Texas-Cimarron	2
Tillman	2
Tulsa	32
Washington-Nowata	6

The following is a chart showing the number of chiropractors located in each city:

Ada	3
Altus	3
Alva	2
Ardmore	3
Bartlesville	5
Bixby	1
Blackwell	2
Bokchito	1
Bristow	1

Broken Bow	1
Buffalo	3
Cherokee	2
Cheyenne	1
Chickasha	2
Claremore	3
Cleveland	1
Clinton	3
Cordell	1
Cushing	2
Dewey	1
Drumright	1
Duncan	3
Durant	2
Elk City	2
Frederick	2
Gage	1
Guthrie	3
Henryetta	1
Hobart	1
Holdenville	1
Hollis	1
Hugo	1
Idabel	1
Kingfisher	1
Laverne	1
Lawton	3
Lindsey	1
McAlester	3
Madill	1
Mangum	1
Marlow	2
Miami	2
Moore	1
Okemah	1
Oklahoma City Area	52
Norman	2
Okmulgee	2
Owasso	1
Pauls Valley	1
Pawhuska	1
Perry	1
Ponca City	5
Poteau	1
Pryor	3
Purcell	2
Sallisaw	1
Sand Springs	4
Sapulpa	5
Sayre	2
Seminole	1
Sentinel	1
Shattuck	1
Shawnee	4
Stillwater	2
Stilwell	1
Sulphur	1
Tahlequah	2
Temple	1
Tulsa	26
Vinita	1
Walters	1
Watonga	1
Weatherford	2
West Siloam Springs	1



# SECTION IV MEDICINE AND RELIGION COMMITTEE

Westville	1
Wewoka	1
Woodward	2
Wynnewood	1

## Recommendations:

1. It is recommended that the Committee on Cults and Quackery continue an educational program on cultists and quacks and that it seek additional ways of informing the Oklahoma public and members of the OSMA about these dangerous practitioners.

## SECTION III MEDICAL-LEGAL RELATIONS COMMITTEE

On July 23-25, 1970, the OSMA Medical-Legal Relations Committee in cooperation with the Oklahoma Bar Association's Committee on Medical Relations will hold a "Medical-Legal Institute" at Fountainhead State Lodge. Over 100 physicians and attorneys are expected to participate in the three day program.

The purpose of the institute is to promote a closer "personal" relationship between the medical and legal professions; serve as a study in malpractice prevention for physicians and to aid attorneys in advising their physician-clients; and, finally, to give both professions an opportunity to enter into a meaningful dialogue on the problem areas existing between them.

Since this institute is a joint effort, it has been decided by the joint committee that neither association should be required to underwrite its cost. This is especially true since the committee has a \$750 bank balance left from the last medical-legal institute held in 1968. In addition to this amount, a \$35 per person registration fee will be charged to help underwrite the institute expenses.

## Recommendations:

1. It is your committee's recommendation that all members of the OSMA be urged to attend the Medical-Legal Institute at Fountainhead Lodge, July 23rd-25th, 1970.

2. The importance of continued liaison with the bar association cannot be overly emphasized. It is recommended that the committee be continued on an indefinite basis and that it continue to seek the further implementation and modernization of the "medical-legal interprofessional code" which was adopted by the House of Delegates several years ago.

During the past twelve months your Committee on Medicine and Religion has conducted three projects for the association. The first of these projects, a joint meeting between physicians and clergymen, resulted in the last two.

On Thursday afternoon, January 15, 1970, your committee conducted a program entitled "Physician and Minister in the Changing Society" at the St. Francis Center for Christian Renewal in Oklahoma City. The chairman of each county society medicine and religion committee was invited to attend the meeting and to bring his personal clergyman. In addition he was given the name of a local clergyman who had expressed particular interest in working in the area of medicine and religion.

Two areas of joint concern were discussed during the program. The first was patient consultation between the physician and the pastor and the second was the use and abuse of drugs. This latter topic generated such interest that your committee determined that special training programs on drug abuse were needed for Oklahoma physicians and clergymen.

Two training conferences on drug abuse were arranged. The first was held Thursday afternoon, February 5th, in Oklahoma City and the second was held two weeks later, Thursday afternoon, February 19th, in Tulsa.

Over 100 Oklahoma physicians and clergymen attended the meetings. A mailing list of their names and addresses was compiled and they will continue to receive the latest information on drug abuse as it is published and becomes available.

## Recommendations:

1. It is recommended that the Committee on Medicine and Religion be instructed to continue its present activities.

2. Since drug abuse is rapidly becoming one of our country's major medical and social problems, it is recommended that the Committee on Medicine and Religion be instructed to continue its efforts in drug abuse education for physicians and clergy.

## SECTION V COMMITTEE ON NURSING

During the past fiscal year your committee continued its formal liaison with the Oklahoma State Nurses

Association. The most obvious benefit can be seen in the "Doctor of the Day" and "Nurse of the Day" program that was conducted at the State Capitol Building during the Legislative Session.

Under the auspices of the OSNA, a registered nurse volunteers each day to work with the physician assigned to the legislative first aid station.

During the past year your committee worked closely with the OSNA to keep the association's legislative committee informed about possible legislation that would affect the nursing profession in this state.

## Recommendation:

1. It is recommended that the Committee on Nursing be continued on an indefinite basis and that it be instructed to continue its active liaison with the nursing profession.

## SECTION VI COMMITTEE ON OSTEOPATHY

During the May, 1969 annual meeting of the association in Tulsa, the House of Delegates readopted a policy to permit osteopaths to participate in certain postgraduate courses offered by the O. U. School of Medicine. It was reported to your committee that during the past year a number of osteopaths had chosen to do so and that there had been no difficulty with the program whatsoever.

The 1969 House of Delegates also recommended that the Committee on Osteopathy schedule a series of meetings with the State Board of Medical Examiners and the OSMA's State Legislative Committee to determine the feasibility of recommending new state legislation to establish a combined licensure board for all healing arts. It was decided that any effort in this regard would be premature until such time that the Osteopathic Association would be willing to hold serious discussions on the possibility.

It was further recommended that your committee establish informal liaison with members of the osteopathic profession and that the committee make itself available for consultation with county medical societies, hospital staffs, individual medical doctors and osteopaths, regarding problems involving interprofessional relationships.

Your committee had no opportunity to follow this recommendation until early in this year. On April 19 your committee met with a delegation from the Oklahoma Osteopathic As-



sociation. To your committee's knowledge this is the first time that a formal meeting has ever been held between the two associations. This meeting was requested by the Osteopathic Association.

In a memo to their members, Walter L. Gray, Executive Secretary of the Osteopathic Association, said that the meeting was "for the sole purpose of discussing the city-county hospital situation in Oklahoma." Your committee was informed that the Osteopathic delegation had been instructed by their board of trustees that they were to discuss only the hospital staff privilege situation.

Their presentation to our committee was made by Gene Ross, D.O. His remarks were taken from the following statement:

"At the present time, *joint* staff privileges are enjoyed in Antlers, Anadarko, Atoka, Bristow, Cleveland, Cordell, Edmond, Fairfax, Fairview, Hobart, Hugo, Idabel, Lindsey, Madill, Pawnee, Sallisaw, Seiling, Stigler, Stilwell, Vinita, Wagoner, Weleetka, Wetumka, Wilburton, Collinsville and Drumright.

"*Dual* privileges are enjoyed at Poteau and at Guymon. These are the only two places where they have dual staff.

"However, the members of the osteopathic profession are denied any staff privileges at Bartlesville, Chickasha, El Reno, Kingfisher, Midwest City, Nowata, Norman, Perry, Ponca City, Stillwater, Weatherford, Woodward, Frederick, Altus, and Lawton.

"It can be seen that there is no particular pattern in this situation in Oklahoma. It stands to reason that there should be a uniform plan in all cities of the state.

"In the first place, if the county hospital or the city hospital is constructed with tax funds and with the supporting Hill-Burton Funds, both the statutes of Oklahoma and the Federal law require the use of the hospital by doctors of medicine and doctors of osteopathy. We have hoped that this matter could be worked out by mutual agreement and certainly not by resorting to court action.

"In Missouri, the Supreme Court held in the case of *Stribling versus Jolley*, that there could be no discrimination between practitioners in public hospitals. This has been followed in Idaho, Iowa, Kansas, Nevada and other states have rulings by the Attorney General.

"Recently, New Mexico passed a law requiring that in order for a hospital to obtain a license and qualify for Federal aid, the hospital must provide evidence that its bylaws apply equally to osteopathic and medical physicians.

"The rules of the Department of Health, Education and Welfare make it mandatory that there can be no distinction between the two professions. And the ruling of the new civil rights passed by Congress definitely precludes this situation.

"Instead of Oklahoma securing a statute such as was passed in 1967 in Wisconsin stating that there could be no discrimination against osteopathic physicians and surgeons and that the same was prohibited by statute, it would occur to us that these two professions interested in the common good, medical care for the public should get together and provide that all tax supported hospitals be open to both professions. Certainly with the proviso that there could be regulatory provisions for anyone who violated regular hospital procedures.

"With this in view, we seek to get an expression from all members of the profession as to how well the joint staff privileges work in their community with a view of working out a peaceable and amicable solution to this problem.

"It is to be realized that this country is faced with the danger of socialized medicine and that there must be a united front on the part of both professions if such a program is to be delayed. It is manifestly reasonable that if this program works successfully in part of the state it can work in all of the state."

After the formal presentation an open discussion was held between the two groups. Your committee pointed out that it could not bind the association in any formal agreement at this time and that this could only be done by the House of Delegates.

After the delegation from the Oklahoma Osteopathic Association excused itself, the committee held a long discussion regarding the formal statement which they had presented. It was pointed out that the information regarding Oklahoma statutes and federal law was not correct. However, the committee did recognize that there is a serious problem regarding staff privileges for osteopaths.

A number of recommendations for

the House of Delegates to consider were deliberated by the committee. The following is the outcome of that deliberation.

#### *Recommendations:*

1. It is recommended that the present Committee on Osteopathy be encouraged to attempt to establish formal liaison with the Oklahoma Osteopathic Association. The committee should be free to enter into open discussion on any and all problems or areas of concern of either association. However, its main purpose should be to reach, if possible, mutually agreeable solutions to interprofessional problems. Formal relations should be established only if the Oklahoma Osteopathic Association is willing to give its counterpart committee the same latitude of discussion. Any decision on possible policy change will, of course, be taken to the OSMA Board of Trustees and House of Delegates.

#### SECTION VII

##### COMMITTEE ON PHARMACY

During the past year your Committee on Pharmacy's activities have been limited. No legislation was introduced in the State Legislature that required our attention.

In view of the importance of a pharmacist being involved in the "health team" approach to public health, the necessity of continued liaison between the medical profession and the pharmacists can be easily seen.

#### *Recommendations:*

1. It is recommended that the Committee on Pharmacy be continued on an indefinite basis and that it continue its liaison activities with the profession of pharmacy and work with the Oklahoma Pharmaceutical Association to have at least two formal meetings next year.

#### Report of the

##### COUNCIL ON SOCIO-ECONOMIC ACTIVITIES

(APPROVED AS AMENDED)

#### *Council Members*

B. C. Chatham, M.D., Chickasha, Chairman

Ann K. Kent, M.D., Muskogee

Richard W. Loy, M.D., Pawhuska

Roger Reid, M.D., Ardmore

James P. Bell, M.D., Oklahoma City

Charles Bodine, M.D., Oklahoma City

Thurman Shuller, M.D., McAlester

Robert Sukman, M.D., Oklahoma City

Walter E. Brown, M.D., Tulsa

Harold Stout, M.D., Waurika



## news

Richard E. Carpenter, M.D., Oklahoma City  
 Arthur E. Schmidt, M.D., Oklahoma City  
 E. N. Lubin, M.D., Tulsa  
 Myra A. Peters, M.D., Tulsa  
 Arnold G. Nelson, M.D., Midwest City  
 Mrs. Port Johnson, Muskogee  
*Occupational Medicine Committee*  
 James P. Bell, M.D., Oklahoma City, Chairman  
 Robert R. Dugan, M.D., Oklahoma City  
 A. M. Mery, M.D., Bartlesville  
 Bob J. Rutledge, M.D., Oklahoma City  
 Kieffer D. Davis, M.D., Bartlesville  
 Frank Phelps, M.D., Tulsa  
 R. L. Lembke, M.D., Ponca City  
 Casper H. Smith, M.D., Duncan  
 W. W. Schottstaedt, M.D., Oklahoma City  
 Gifford H. Henry, M.D., Tulsa  
 J. Robert Dille, M.D., Oklahoma City  
 Mark A. Everett, M.D., Oklahoma City  
 Robert G. Perryman, M.D., Tulsa  
 Jack L. Richardson, M.D., Tulsa  
 James D. Green, M.D., Tulsa  
 Thomas E. Acers, M.D., Oklahoma City  
 C. J. Sternhagen, M.D., Oklahoma City  
 Samuel C. Jack, M.D., Lawton  
*Prepaid Medical Care Committee*  
 Charles Bodine, M.D., Oklahoma City, Chairman  
 Richard W. Loy, M.D., Pawhuska  
 Neil B. Kimerer, M.D., Oklahoma City  
 Joe E. Tyler, M.D., Tulsa  
 B. H. Gaston, M.D., Muskogee  
 Vernon M. Lockard, M.D., Bartlesville  
 Edward L. Moore, M.D., Tulsa  
 Herbert M. Kravitz, M.D., Oklahoma City  
 Samuel R. Turner, M.D., Tulsa  
 Arthur E. Schmidt, M.D., Oklahoma City  
 Herbert Kent, M.D., Oklahoma City  
 Harold W. Calhoon, M.D., Tulsa  
 Emil E. Palik, M.D., Tulsa  
*Governmental Relations Committee*  
 Robert Sukman, M.D., Oklahoma City, Chairman  
 Mark R. Johnson, M.D., Oklahoma City  
 Arnold G. Nelson, M.D., Midwest City  
 Ross Deputy, M.D., Clinton  
 Casper H. Smith, M.D., Duncan  
 Rayburne W. Goen, M.D., Tulsa

W. B. Renfrow, M.D., Oklahoma City  
 W. C. McCurdy, M.D., Purcell  
 Jack D. Fetzer, M.D., Woodward  
 James W. Owen, M.D., Bartlesville  
 William J. Preston, M.D., Tulsa  
 George E. Merkley, M.D., Boise City  
 John H. Reynolds, M.D., Muskogee  
 John A. Schilling, M.D., Oklahoma City  
 Oliver H. Paterson, M.D., Sapulpa  
 Mrs. George Miller, Tulsa  
*Insurance Review Committee*  
 (Sub-Committee A)  
 Mark D. Holcomb, M.D., Enid, Chairman  
 David R. Brown, M.D., Oklahoma City  
 Earl M. Bricker, M.D., Oklahoma City  
 Robert J. Hogue, Jr., M.D., Guthrie  
 Charles R. Gibson, M.D., Chickasha  
 Frank H. Austin, M.D., Lawton  
 Averill Stowell, M.D., Tulsa  
 Eugene M. Henry, M.D., Muskogee  
 Edward T. Cook, Jr., M.D., Anadarko  
 Joe S. Hester, M.D., Muskogee  
 (Sub-Committee B)  
 Howard B. Keith, M.D., Shattuck, Vice-Chairman  
 Fred D. Switzer, M.D., McAlester  
 Robert A. McLauchlin, M.D., Oklahoma City  
 G. Rainey Williams, M.D., Oklahoma City  
 Alfred H. Bungardt, M.D., Tulsa  
 John M. Perry, Jr., M.D., Madill  
 James S. Williams, M.D., Bartlesville  
 Maurice Gephardt, M.D., Muskogee  
 Homer D. Hardy, Jr., M.D., Tulsa  
 Ross Deputy, M.D., Clinton  
 Edward L. Moore, M.D., Tulsa

### SECTION I Council Activities

The purpose of the council is to oversee the activities of the committees under its direction and, in addition, it may initiate projects of its own.

For the past several years, representatives of the council have been involved in the Oklahoma Health Economic Council, an organization created in 1965 under the auspices of Governor Henry Bellmon to identify health economic problems in the state and to formulate projects related to such problems.

As outlined in the 1969 annual report of the council, OHEC activities, while well conceived at the outset, have declined due to diminishing financial support from the sponsoring organizations. However, one of the

findings of the statewide survey carried out in 1965 revealed the need for a "buyers guide" to assist Oklahomans in the selection of high-quality prepaid protection against the costs of illness. By doing so, it was thought, a well-protected public would be less inclined to support further government health care schemes.

Although the council itself has been rather inactive this year, its representatives on the Oklahoma Health Economic Council have participated in developing the aforementioned "buyer's guide," and a proposed draft received favorable comments when presented to the Governor's Conference on Community Health Planning earlier this year.

It appears obvious that "OHEC" can no longer be sustained as a useful organization due to lack of adequate funding. However, the completion of one of its principal projects—the "buyers guide" — is a desirable goal. Oklahoma Blue Shield will very likely provide substantial underwriting to publish and distribute large numbers of the guides on a statewide basis. Through this joint effort with Blue Shield, therefore, perhaps the private sector of health care financing can be materially bolstered.

Following is the text of the proposed buyers guide, "PRICE TAG FACTS ABOUT HEALTH CARE." To conserve space, only the major section headings and the copy are reproduced. In printed form, an attractive cover will be included and there will be clear delineations between the various sections, complete with artwork.

### PRICE-TAG FACTS ABOUT HEALTH CARE

A Buyer's Guide to Sensible Health Care Protection

ONE IN SEVEN OKLAHOMANS WILL BE HOSPITAL PATIENTS THIS YEAR!

Health care is unpredictable as to *when* you will need it and *how much* it will cost. But—you can be prepared by budgeting for it with a *quality* prepaid health care plan.

If this should happen to you or a member of your family, would you know what to expect in the way of costs? Do you know what all the services are for which a hospital and doctor must charge? Would you be able to pay hospital and doctor bills "out-of-pocket?"

This booklet is designed to help you answer these questions and others.



## WHAT MAKES UP DAILY HOSPITAL CHARGES?

*Daily Hospital Care* includes room, meals and 24-hour general nursing services. Hospital rooms, unlike hotel or motel rooms, have special built-in facilities and equipment needed for the care of sick and injured people. Meals are different, too. Most hospital meals are made up of special foods ordered by doctors for their patients. Because of these unique differences, charges for hospital rooms are of necessity higher than you should expect to pay for a hotel or motel room. A good health care plan should cover most of the cost of a semi-private room. Health care costs are rising about 6 percent per year. This is due to increasing labor costs, higher prices for supplies and equipment and the increasing demands by the public for health care services and facilities.

*Related In-Hospital Services* are those special technical services needed at one time or another by every person entering a hospital as a patient. These are charged for as the patient uses them. They include:

*Laboratory.* Lab procedures are performed when patients are admitted to help diagnose their problems and as a guide to necessary treatment. In complicated cases, laboratory charges can amount to as much as \$100 or even more.

*Drugs and Medication.* A patient should expect to be charged for the specific drugs and medication ordered by his doctor and which are administered by professional hospital personnel. Depending on the patient's problem . . . and the drugs needed . . . these charges can run as high as \$25 per day or more.

*Operating Room—Delivery Room.* These rooms are especially equipped with highly expensive equipment. The rooms are explosion-proof, and everything about them is kept sterile. This requires special clothing, sterilization techniques, and professionally-trained personnel. For the patient who needs to use them, charges of at least \$50-\$75 should be anticipated.

*X-ray.* Practically all accident cases, as well as many medical cases, require the use of X-ray to make an accurate diagnosis. X-ray machines cost \$20,000 and up, are quickly obsolete, and must be operated by professionally-trained personnel. \$100 or more for such services is not unusual.

*Dressings, Splints, Casts, etc.* In severe accident and burn cases, the costs for these mount rapidly. A bare minimum would be about \$25.

*Oxygen.* This is a service frequently used in heart cases and other critical-type cases. One day's use may run as high as \$25. In prolonged or critical cases, the patient may be kept under oxygen for several days or even weeks.

*Electrocardiograms, Basal Metabolism Tests.* Commonly used, but expensive, equipment (operated only by professionally trained persons) is required for these and other tests. An allowance of \$50 or more should be provided.

*Anesthetic Materials and Equipment.* These are costly, too. It would be wise to allow \$35 if these items are needed for your care.

### PAYING FOR PHYSICIANS SERVICES

The physician is the captain of your health care team.

He has a minimum of nine years' college and graduate level training . . . he possesses skills and judgment to guide you through a spell of illness . . . he directs the supportive help which may be necessary in your course of treatment, such as professional nurses, technicians, therapists and dietitians . . . and he makes proper use of hospital services and equipment as your condition requires.

Medical care should be measured by its value rather than its cost, yet serious illness demands a great deal of professional care and you should have ample benefits in your health care plan to cover the bulk of the costs which might be involved.

Two basic approaches are available to the buyer of a health protection plan:

First, many physicians recommend that you or your employer enroll in a plan which pays all or a high percentage of your doctor's charges. These high benefit programs, which are new but growing in popularity, state that covered medical services will be paid on the basis of a percentage of physicians' charges. There are variations to this approach . . . such as *UCR* (usual, customary and reasonable payments) and *Major Medical* programs. However, these variations have the same basic benefit — the value of your policy will be predictable. You will have the security of knowing that your doctor bill will be met by realistic bene-

fits.

Another approach is to purchase an *Indemnity Plan*. These programs are variable in quality. They are based on paying a *fixed dollar amount* for a given procedure . . . the patient must pay the balance of the physician's actual charges. Caution must be exercised if you select this type program, because benefit allowances often have no relationship to the value of the services provided.

Medical fees vary by the economic area in which you live and by the simple fact that no two illnesses are just alike in the amount of skill and time which may be necessary for proper treatment.

Thus, if you choose an indemnity Plan, make certain that the fee benefits are realistically related to the charges in your area. You can do this by having your family doctor or his insurance clerk review the payments made for several common medical and surgical services. Beware of the low premium plan . . . generally, "you get what you pay for."

Here are a few common health problems, and suggested *minimum* allowances, which can be used as a check-list of your Indemnity Plan's adequacy:

- A. Obstetrical Delivery—\$120
- B. Appendectomy—\$120
- C. Cholecystectomy (Gall Bladder)—\$200
- D. Daily Charges For Hospital Care—\$5.00
- E. Tonsillectomy—\$50
- F. Hysterectomy—\$200

If your Indemnity Plan does not provide at least the above allowances, the coverage cannot be considered adequate.

Since high-benefit Indemnity Plans are not readily available to all Oklahomans, it is wise to purchase a companion Major Medical program which, after a deductible, will pay a predictable percentage of your remaining doctor bill.

How much a health care plan pays for certain conditions is not all of the story . . . you must also be certain that your plan includes a rather broad range of benefits for the more common medical problems, such as . . . surgery, obstetrical services, in-hospital medical, general anesthesia, radiation therapy, diagnostic X-ray (in and out of the hospital) and laboratory (in and out of the hospital). Here again, your family doctor's office can be helpful.



# ARE YOU REALLY PROTECTED AGAINST HOSPITAL-MEDICAL COSTS?

For good protection, be sure that the payment practices of the insurance company are such that they will be accepted by the hospital or doctor. Don't be misled by "gimmick" insurance which is sold on a price basis.

Such companies may offer high benefits for rarely needed (or infrequently used) services; or may offer you a flat dollar-amount per day or per week while you're in a hospital. But contracts such as these rarely ever effectively meet a patient's needs.

Before buying health insurance, there are ways you can and should check and compare companies by performance. Two reliable sources—"Argus Chart" and "Spectator" will reveal how much of your premium dollar is returned to you by health insurance companies in actual health care benefits. These are independently published consumer reports. Copies are available at your public library or from the office of the State Insurance Commissioner.

Scope of coverage in your health protection is what counts. Check these points:

1. Who is covered and at what ages.
2. What waiting period and/or reference to "pre-existing conditions" is required.
3. What amount is allowed per doctor visit at the hospital on cases not involving surgery.
4. What type cases are excluded from coverage.

## HERE ARE SOME MONEY-SAVING TIPS

1. Select a company that returns the greatest part of its income in health care benefits to you and other policy-holders.
2. Select a company that has a good reputation. Your local hospital or physician can advise you in this regard.
3. If your employer does not have a group plan, encourage him to do so. Usually benefits are higher and rates are lower.
4. Select a program that provides the most benefits for services needed.
5. Select a program that is non-cancellable and one that may be continued after change of job or resi-

dence.

6. Select a well-known company which will be recognized by physicians or hospitals out-of-state or away from home.

7. Buy coverage for in-hospital expenses first, out-of-hospital expenses second and loss-of-income protection last.

8. Buy one good policy rather than several poor ones.

9. Read the policy. Learn what is covered, and to what degree, before buying.

10. Contact your doctor early—during regular office hours if possible. See him when the first signs of illness occur. Early treatment can mean savings of life and dollars.

11. Don't pressure your doctor. He will prescribe and do what he thinks best for you.

12. Follow instructions. Your doctor's instructions are intended to help you get well as quickly as possible.

13. Discuss fees. A clear understanding in the beginning may avoid misunderstanding later.

14. Select your doctor before you need him.

15. Avoid the luxuries. Private duty nurses and private rooms are nice, but they add to your costs.

16. Reduce costly hospitalization by obtaining services outside of the hospital as recommended by your doctor.

17. Keep receipts and good records. Personal health costs are tax deductible subject to state and federal regulations.

## BE YOUR BEST FRIEND—

Check the Price-Tag of Health Care and budget FOR YOUR HEALTH-CARE PROTECTION!

Printed in the Public Interest by The Oklahoma Health Economic Council which has your good health at heart!

The Oklahoma Health Economic Council was organized under the authority of former Governor Henry Bellmon in 1966, after a statewide study showed the need for a public education program to urge Oklahomans to budget for their health care protection. Sponsoring groups of OHEC include Agriculture, Labor, Industry, the Medical Profession and the Hospital Industry.

## Recommendation:

1. It is recommended that the Council on Socio-economic Activities be authorized to participate with Oklahoma Blue Shield and the Okla-

ma Hospital Association in printing and distributing the "Buyers Guide" with the proviso that the OSMA financial contribution be governed by budgetary considerations as determined and approved by the Board of Trustees.

## SECTION II

### Prepaid Medical Care Committee Background:

In 1968, the House of Delegates approved a Blue Shield proposal to implement a prepayment plan based on the principle of paying physicians their usual, customary and reasonable fees. This action was taken following a survey of 1,500 hospitalized patients which revealed that most health insurance benefits were not realistically related to actual costs of care.

The approved report also observed that Blue Shield's public service philosophy, high return on the premium dollar, and its cooperative relationship with the association deserved recognition as a preferred fiscal agent for health care financing. Further, the Delegates supported the theory that government health care programs are often based on vacuums existing in the quantity or quality of private health insurance plans. It was felt by the Delegates that more comprehensive coverage would result in a more satisfied public and, in turn, would at least forestall further government inroads in the health economic field.

Following House of Delegates approval, Blue Shield obtained approval from the National Association of Blue Shield Plans to implement the program, and the mechanism for processing claims was subsequently approved for use in the Federal Employees Program and in CHAMPUS (Dependents of servicemen).

The Prepaid Medical Care Committee was instructed to serve as liaison in developing the UCR program in Oklahoma.

### Developments During the Year:

The Prepaid Medical Care Committee has been occupied during the past organizational year with three problem areas related to Blue Shield: Delays in claims processing, the composition of the Blue Shield Board of Trustees, and apprehension from the membership regarding the wisdom of becoming involved in the UCR concept. Progress reports on these items appear below:



### *Claims Processing:*

Many reports from physicians revealed extreme delays in receiving checks from Blue Shield for services rendered. Blue Shield officials admitted to having considerable problems in this area, principally caused by increased volume, personnel training problems and adjusting to total computerization.

Despite these problem areas, the committee felt too much time had elapsed without relief, and it was recommended to the OSMA Board of Trustees that Blue Shield be privately admonished for its poor performance in claims processing. The Board subsequently issued the admonishment.

On the day following the Board of Trustees meeting, February 1, Blue Shield created a special task force to clear out the backlog of claims. On February 2, 1970, Blue Shield had 23,941 unpaid claims on hand, and this was reduced to 10,504 by March 13th. Moreover, a claims "aging" procedure was initiated to insure that very few claims will be in process over 30 days after receipt.

The Prepaid Medical Care Committee and the OSMA Board of Trustees voted on March 22 to accept this report from Blue Shield and to commend the organization for its prompt response to the association's request for improved performance.

### *Composition of the Blue Shield Board:*

Historically, and as provided in the Blue Shield bylaws, the Blue Shield Board has been composed of one-half physicians and one-half consumer representatives. In an effort to broaden the Blue Shield scope of benefits, a limited dental service program was initiated and a decision was made to provide for three dentists on the Blue Shield Board. Blue Shield trustees considered forming a separate Dental Service Corporation at the time (with a separate board) but this plan was set aside in the interest of economy and also because it would require amendments to the enabling law under which Blue Shield operates.

It was decided by the Blue Shield Board that dentists could be defined as physicians (since they are recognized as such by Medicare). Therefore, the Blue Shield Board, which was then composed of nine medical doctors and nine businessmen, was expanded to nine M.D.'s, three den-

tists, and twelve laymen, thus maintaining the required 50-50 ratio of health service providers and consumers.

While not wishing to offend the Oklahoma State Dental Association, the Prepaid Medical Care Committee and the OSMA Board of Trustees took exception to the defining of dentists as physicians and took notice that medical doctor representation on the Blue Shield Board had been diluted. The OSMA Board of Trustees formally requested that physician representation on the Blue Shield Board be restored to the traditional 50 percent.

The Blue Shield Board met on February 15 to consider this request. It was decided to seek new enabling legislation to form a separate Dental Service Corporation as a means of reverting to the original Blue Shield Board with 50 percent physician representation. Once this is accomplished and new articles of incorporation and bylaws are drafted, the three dental representatives and three laymen now on the Blue Shield Board will resign and re-constitute themselves as the Board to govern the Dental Service Corporation.

The OSMA Board of Trustees approved this plan at a meeting held March 22, 1970.

### *The UCR Program:*

The association's House of Delegates approved the concept of a UCR program in 1967 and asked Blue Shield to develop a specific plan. This was done by the 1968 annual meeting of the Delegates, and after lengthy discussion, a compromise version was approved for implementation.

Blue Shield has not yet marketed the UCR plan to local accounts, but in 1969 there were 5,217 Oklahomans insured under this system through contracts negotiated nationally. In addition, the claims review procedure outlined in the report approved by the Delegates in 1968 is being employed in the Federal Employees Program (75,057 insureds) and in CHAMPUS (192,229 insureds).

After reaching this point of development based on the approval of the House of Delegates, opposition to the Blue Shield UCR program has developed and will undoubtedly be the subject of discussion at this annual meeting of the Delegates. There is some division within the ranks of the Prepaid Medical Care Committee as to whether or not the association

should maintain its endorsement of Blue Shield UCR.

Opponents of UCR state that while it may be necessary to participate in such programs where government is concerned, it is not at all desirable where private insurance is involved. Moreover, those who oppose UCR say that it is but another name for a "service contract," a health insurance vehicle long opposed by the association.

Those physicians who continue to support the Blue Shield UCR plan see it as a practical approach toward preserving what is left of the private insurance market. They believe that the profession must keep attuned to the growing public demand for comprehensive benefits and for a payment system which provides the consumer with a policy of predictable value (subscribers may purchase 70%, 80%, 90% or 100% coverage for medical costs). Proponents disagree that UCR is a service contract in disguise since they feel UCR allows physicians to select — case by case — whether they will accept a patient under the UCR agreement, in contrast to a service contract where doctors contractually agree to care for all patients at a fixed rate of compensation.

It must be pointed out that the Blue Shield plan vests final authority for the reasonableness of a physician's charges in the hands of medical society review committees. This unique arrangement must be considered in the light of alternatives which are on the horizon, alternatives advocated through public and political pressures.

Your committee noted a question of semantics in the claims review policy approved by the House of Delegates in 1968, regarding the definition of "customary fees." A revised definition was suggested to the Board of Trustees on February 1, to read as follows:

*"Customary Fees:* A range of fees is compiled for each of the services performed and reported by the individual doctors of similar ability and/or experience within a given area which will assure the optimum level of paid-in-full benefits. This range will be established to accommodate a minimum of 90% of the services in a given socio-economic area."

This clarified definition was approved by the Board of Trustees with



an amendment to strike the words "paid-in-full." It was recognized by the Board of Trustees that the House of Delegates agreement with Blue Shield could only be amended by the Delegates. Blue Shield officials are aware that the "paid-in-full" question will be considered at this annual meeting and have observed that such action will negate the purpose of UCR and will render them unable to compete in today's market place where predictability of policy value is being demanded by large employers.

Your committee would be presumptuous to question the wisdom of the Board of Trustees or House of Delegates; however, the following recommendations for action are suggested:

*Recommendations:*

1. It is recommended that Blue Shield be commended for recent efforts and progress to resolve inordinate delays in the payment of physicians' claims.

2. It is recommended that the effort of the Blue Shield Board to restore medical doctors to 50% of the board composition be accepted.

3. It is recommended that the definition of "Customary Fees," as approved by the OSMA Board of Trustees, be approved (subject to a careful review of what the "paid-in-full" amendment would do to Blue Shield's competitive position).

4. It is recommended that the OSMA Board of Trustees be authorized to negotiate with Blue Shield to find a mechanism whereby a physician can avoid participating in the UCR program on an individual case basis if he so desires. This mechanism should be in addition to the so-called agreement in advance method.

It is recommended that UCR payments not be construed as a service contract.

### SECTION III

#### *Governmental Relations Committee*

The past year has been fraught with continuing pressure and criticism from government, principally in the areas of alleged physician-abuse of Medicare and Medicaid, rising costs of health care, and the manner in which Americans have access to medical care under our present system (which has been termed a "non-system").

The organizational year hardly began until the Senate Finance Com-

mittee forced the release of physicians' names who received \$25,000 or more in the past year for Medicaid services, and charges were leveled through the nation's press about widespread abuses of the program. To the credit of the OSMA officers and the Director of the Department of Public Welfare, an immediate press conference was held where joint statements were issued denying any known cases of fraud in Oklahoma and generally giving the profession a clean bill of health.

Later on, earnings under Medicare were released by the Senate Finance Committee. These, however, were released by physician code number and local physicians were not embarrassed by having their names associated directly or by implication as having abused the program. This second attempt by the Senate Finance Committee to discredit the profession and to transfer the fruits of an ill-designed law to the responsibility of the profession was itself discredited when the AMA and state medical associations pointed out many errors and misleading conclusions in the report, such as charging a hospital's entire income to a single physician. Again, OSMA reactions in the press were as good as could be expected under the circumstances.

These attacks by the U. S. Senate's most powerful committee, the pronouncements of labor and other liberal organizations, and the slanted efforts of certain national news media to support the socialization of medicine can bring your committee to no other conclusion than to expect even more trying times ahead.

The theme of health as a human right — consumer controlled — is being generated into a crescendo without regard to the health delivery resources of the nation. The ambitions of politicians, and the efforts of bureaucrats and organized labor to emulate the nationalized health programs of lesser nations are joined in a massive conspiracy to manufacture a "health crisis."

It is the assignment of the Governmental Relations Committee to deal with existing tax-supported programs rather than to engage in legislative activities or to be clairvoyant about tomorrow's health care "system." Suffice to say that the powerful array of forces dedicated to reshaping the practice of medicine will, at best, subject the profession to a great deal

more regimentation in the very near future.

Meanwhile, relationships with the local administrative agencies of federal programs have been generally good, subject to an incessant flow of new restrictions and regulations emanating from the federal level. There have been problems in the processing of claims, but the Medical Insurance Review Committee has done an excellent job under the circumstances to achieve equitable payments for services rendered to government beneficiaries.

The association has good communications on almost a daily basis with the local administrative agencies, and the ups and downs of individual problems have been leavened by a general spirit of cooperation. We must remember not to transfer blame for federal dictates to those organizations at the state level who have the responsibility to carry them out.

At the same time, there is a limit as to how far the profession can and should go in what is fast becoming a unilateral arrangement whereby the government is aimed toward establishing the conditions of our employment and setting a value on our services.

One vexatious problem has occurred during the year which seems to be worked out now in the best manner possible.

The Social Security Act was amended (effective in January, 1969) to require that each state which has a Title XIX program must:

"provide for agreements with every person or institution providing services under the state plan under which such person or institution agrees (A) to keep such records as are necessary fully to disclose the extent of the services provided to individuals receiving assistance under the state plan and (B) to furnish the state agency with such information, regarding any payments claimed by such person or institution for providing services under the state plan, as the state agency may from time to time request."

The Department of Public Welfare delayed implementing this amendment to the law for over a year, until required to do so by the federal government. In February, 1970, a bilateral agreement was circulated for the signature of all providers of



health services. The format of the agreement was that of an application to participate in Medicaid . . . it incorporated the agreement to keep and furnish information as described above and also included an agreement to abide by all federal and state regulations.

This form was found to be objectionable by the association's Board of Trustees and more than one-half the membership refused to sign it.

Continuing negotiations between association representatives and DPW resulted in a meeting in Washington with federal officials including HEW Undersecretary Venneman. Mr. Venneman and others concurred that a bilateral contract was not required (although optional with the state plan). Instead it was determined that the language of the law regarding record keeping could be imprinted on the individual claim form as a part of the jurat.

This alternate plan was approved by the OSMA Board of Trustees by telephone conference call on April 28th, and was subsequently approved by the Oklahoma Public Welfare Commission on May 5th. References to abiding by all regulations and the application concept were eliminated.

At the same time the Board of Trustees agreed to amend Oklahoma's federally-approved Title XIX plan to provide for the suspension or removal of providers from Medicaid participation based on cause. Previously, any licensed physician had the automatic right to bill for Medicaid services subject to peer review.

Peer review is still involved, however. Prior to any action to suspend or revoke the Medicaid privileges of an OSMA member, he will be counseled with and given a hearing. The OSMA would be notified of the contemplated action in advance and would be afforded the opportunity to assist the involved physician and to attend the hearing. Rules for this cooperative arrangement are to be formally established and reviewed at least annually by the OSMA and the DPW.

Regarding other developments, fee cutbacks in Oklahoma can be anticipated. The House Ways and Means Committee, in studying Medicare's costs, is expected to lend legislative encouragement to closed panel group practice, to relate fee adjustments to a modified cost-of-living index, and to develop more rigid methods in de-

termining the reasonableness of charges.

#### *Recommendation:*

1. Prior to the implementation of the Medicare law, the House of Delegates took the position that payment for health services by the government should be at the fair market value, and that physicians should not be expected to underwrite a tax-supported program through personal charity. Therefore, it is recommended that the association remain alert for any attempts at unreasonable price controls, and that the House of Delegates be convened immediately in the event such occurs.

#### *SECTION IV*

##### *MEDICAL INSURANCE REVIEW COMMITTEE*

Since July 1, 1966, the association has maintained a fee review mechanism to adjudicate claims involving health care programs which pay physicians according to "usual, customary and reasonable" fees (UCR).

In July, 1969, at the direction of the OSMA Board of Trustees, the organization and procedure of the Medical Insurance Review Committee was changed in order to accelerate the handling of cases. The new organization called for two subcommittees of 10 members each, plus a chairman, to meet on alternate months.

All health care programs paying on the basis of UCR were then instructed to send disputed cases directly to the state medical association. When they were received in the association office they were immediately forwarded to a county medical society with a notation that they would be heard at the following state insurance review subcommittee meeting. The county society was invited to submit an opinion on the case to the state committee. The physician involved was also invited to appear before the committee.

All cases had to be properly filed and documented a minimum of 15 days before the subcommittee meeting. Any case arriving after the 15th day was delayed until the following month.

The first subcommittee hearing was held on August 24th, 1969, and the last one, prior to this annual meeting, was held April 26th of this year. During that time a total of nine meetings were held and the two committees considered 85 cases.

Most of the carriers involved fol-

lowed the system quite well. When the established system is followed, your review committee believes that questioned cases can be adequately and rapidly resolved.

#### *Recommendations:*

1. It is recommended that the Medical Insurance Review policy of the OSMA be continued.

#### *SECTION V*

##### *REPORT OF THE COMMITTEE ON OCCUPATIONAL MEDICINE*

A special review panel established to aid the Industrial Court in analyzing divergent medical testimony and examining Workmen's Compensation patients, has severed its formal relationship with the Court.

The panel, representing over fifty Oklahoma doctors of various specialties who had voluntarily agreed to aid the court, saw only twelve cases since its inception in the summer of 1969. In addition, the panel was attacked by organized labor, trial lawyers and members of the Oklahoma Legislature. Your committee chairman, after consultation with association leaders took this action in late March.

Incidents that led to the withdrawal of the formal relationship are as enumerated below:

1. The Industrial Court awarded 8,199 claims to Workmen receiving injuries in 1968. Had the medical testimony been as divergent as indicated by newspaper articles quoting the court judges, it seems more than 12 cases would have been referred to the panel.

2. A State Supreme Court lawsuit questioning the Industrial Court's authority to utilize such a panel implicated the State Medical Association. (The suit has been dismissed.)

3. Written attacks against the panel were made by organized labor.

4. One member of the Oklahoma State Senate referred to some doctors as "pimps" for the insurance industry.

5. Adverse legislation was introduced and passed the Senate that would have negated the effectiveness of impartial medical examiners. (This legislation later died in the House.)

Your Committee met in early spring to study cases submitted to the panel. Only six cases were complete enough to be reviewed—too few to evaluate the effectiveness of the panel. Judges on the court have been reluctant to utilize the services of the



panel for unknown reasons.

While most of the Committee's time has been directed toward the Industrial Court, other matters have received attention. The Committee supported legislation creating Health and Safety Standards for Oklahoma industry. This legislation passed and has been signed into law. An amendment requesting physician representation on the Health and Safety Board was denied for political reasons, however, an appeal has been made to industry and the Governor's office to designate a physician member.

Your Committee has maintained a close relationship with the AMA's Department on Occupational Medicine and has kept abreast of Federal legislation. The Committee Chairman attended the AMA Congress on Occupational Health in St. Louis last year.

The Committee has established an excellent rapport with organized industry and insurance companies dealing in Workmen's Compensation Insurance.

#### *Recommendations:*

1. The Committee be authorized to conduct educational programs for physicians dealing in Occupational Medicine.

2. That a liaison with organized labor and the Bar Association be attempted to work out mutual problems in Occupational Health cases.

3. Oklahoma physicians be encouraged to continue working with the Industrial Court as impartial medical examiners on an individual basis.

#### *Report of the COUNCIL ON INSURANCE (APPROVED)*

##### *Council Members*

C. E. Woodard, M.D., Tulsa, Chairman

Robert W. Kahn, M.D., Oklahoma City

William G. Bernhardt, M.D., Midwest City

William M. Leebron, M.D., Elk City

Don Culwell, M.D., Ponca City

Mrs. William Leebron, Elk City

Jack D. Fetzer, M.D., Woodward

C. Alton Brown, M.D., Oklahoma City

Thomas A. Bruce, M.D., Oklahoma City

David D. Fried, M.D., Hollis

J. D. Powell, M.D., Poteau

John R. Smithson, M.D., Dewey

#### *SECTION I DISABILITY INCOME PROGRAM*

The disability income program is underwritten by the Insurance Company of North America and is administered by C. L. Frates and Company.

There are over 800 members insured under the plan and loss experience is at an acceptable level. The program allows a physician to select from a number of waiting periods and a variety of monthly benefit ranges up to \$800 per month. It also provides options as to the length of time benefits will be paid for disability due to sickness . . . three years, five years, or to age 65.

In order to update the program in light of inflation, the company has offered to increase the amount of monthly indemnity available to \$1,200 per month. This proposal is currently under study by the Council on Insurance.

To keep the program actuarially sound, a continuing input of new enrollments of younger physicians is essential. The company has agreed to reopen enrollment to physicians under age 40 for a period of 90 days, beginning June 1st, regardless of their insurability. However, they would be restricted (if uninsurable) to \$200 a month coverage and a 30-day waiting period before benefits would begin after the date of disability.

#### *SECTION II OVERHEAD EXPENSE PROGRAM*

This program is underwritten by the Continental Casualty Insurance Company through C. L. Frates.

It indemnifies physicians against the costs of keeping their offices open during periods of disability. The premiums are deductible as a business expense.

Experience has been so favorable over the years that a 20% rate reduction was achieved last year, and available monthly coverage was increased from \$1,000 to \$1,500.

#### *SECTION III GROUP TERM LIFE INSURANCE*

This program is underwritten by the Massachusetts Mutual Life Insurance Company through the Wilson and Wilson general agency.

The plan insures each member for the amount of insurance purchased by the annual premium of \$150 at a specific age. For example, at age 40 a member would qualify for \$21,625.

In addition, the plan features double indemnity (triple on a common carrier), waiver of premium, dismemberment and loss of sight coverage. As the coverage decreases in total amount, due to a member's increasing age, the loss of coverage may be converted to an individual policy each year without evidence of insurability.

As of April 1st, 316 members were insured for benefits of \$4,040,125. During the year two death claims were paid in the amount of \$8,625.

Since the inception of the plan in 1956, over fifty deceased members' families have been paid in excess of \$800,000 benefits. The administrator estimates that the accumulated deficit of \$129,000 (premium income and paid claims) over the history of the program will be reduced by \$34,000 this year due to favorable loss experience.

#### *SECTION IV PROFESSIONAL LIABILITY PROGRAM*

Despite a recent rate increase, Oklahoma continues to have one of the nation's finest liability programs. The program is underwritten by the Pacific Employers Indemnity Company, a subsidiary of the Insurance Company of North America.

Rates were increased this year despite relatively good loss experience. There were three reasons for the increase:

First, the industry changed its "loss development factor" upwards. This is a multiplier which is applied against reserves for pending or potential cases as an indicator of the company's actual exposure. Because the statute of limitations does not run on malpractice in a normal fashion, claims reported in any single year do not reflect the true hazard of experience (some cases are charged against the premium year as long as twenty years later, and a five to seven year delay is not uncommon). The new loss development factor, and possible revisions favorable to Oklahoma will be discussed later.

Secondly, the industry raised its "increased limits factor." Again, this is a multiplier used to compute premiums for limits higher than nominal limits used as the base.

Finally, PEIC-INA re-classified physicians as to potential risk. Whereas they were formally assigned into four classes, depending on the nature of their practice, the industry



changed this to a five-class system and moved some physicians to the next higher class. PEIC-INA delayed implementing this change in Oklahoma for one year after other companies adopted it.

The new OSMA rates, while considerably higher for most physicians, are still 10% below the rates recommended for Oklahoma by the National Bureau of Casualty Underwriters. Moreover, since the time OSMA rates were increased the bureau has increased basic rates in Oklahoma by 50% and has raised the increased limits factor again, all of which places the OSMA program in an even more competitive position.

The OSMA and its agent have protested the INA using a national loss development factor on the association's plan, since our loss experience is much more favorable than the national average. The company has agreed to this concept, and their actuaries are now working with our actuarial advisors in developing a factor totally based on Oklahoma loss experience.

OSMA is continuing to carry out educational programs to reduce the incidence rate of claims. A professional liability booklet has been prepared by the association staff, printed at INA expense, and distributed to the profession as a reference manual. Crawford Morris of Cleveland, Ohio, nationally-known defense attorney, has made appearances on the subject before large audiences of Oklahoma physicians. A mock trial is scheduled during this meeting to illustrate points of law and medical-legal pitfalls which are common breeding grounds for malpractice complaints. All OSMA members are urged to attend this session at 3:30 p.m. on Saturday.

SECTION V  
EXCESS LIMITS LIABILITY  
PROGRAM

As a companion to the association's basic malpractice program, the OSMA has endorsed the INA's "XIC" policy for those physicians who wish to carry their protection to very high limits of coverage.

This coverage requires basic malpractice coverage of \$100,000/\$300,000, after which the XIC program will extend the protection to as high as \$1,000,000. The XIC plan also provides excess limits protection on homeowners, auto, farmers personal liability, watercraft, aircraft, etc.

(subject to having required basic liability protection for each peril).

XIC is recommended by the Council on Insurance as an economical way to achieve adequate protection during this period of excessively high damage suit awards. However, XIC is not mandatory with respect to the association's basic malpractice plan . . . a physician may elect to purchase his entire protection under the basic program.

Report of the  
COUNCIL ON PUBLIC HEALTH  
(APPROVED AS AMENDED)  
Council Members

Hayden H. Donahue, M.D., Norman, Chairman  
Paul A. Bischoff, M.D., Tulsa  
Armond H. Start, M.D., Oklahoma City  
Charles E. Smith, Jr., M.D., Oklahoma City  
Wayne J. Boyd, M.D., Bartlesville  
Gifford H. Henry, M.D., Tulsa  
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Robert E. Herndon, M.D., Chickasha  
Carl D. Osborn, M.D., Ada  
A. B. Colyar, M.D., Oklahoma City  
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Carl H. Guild, M.D., Bartlesville  
Guy V. Rice, M.D., Norman  
Donald H. Olson, M.D., Vinita  
H. Ruprecht, M.D., Tulsa  
Richard M. Burke, M.D., Tulsa  
Wm. S. Dandridge, M.D., Muskogee  
Mrs. Charles Bodine, Oklahoma City  
Committee on Alcoholism  
Charles E. Smith, Jr., M.D., Oklahoma City, Chairman  
John M. Moore, M.D., Pauls Valley  
Frank Hladky, M.D., Tulsa  
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J. W. McDoniel, M.D., Chickasha  
Wolfgang K. Huber, M.D., Norman  
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David C. Mock, M.D., Oklahoma City  
David Fried, M.D., Hollis  
Mrs. John Kienzle, Shawnee

Disease Screening Committee  
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Bén I. Heller, M.D., Oklahoma City  
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R. LeRoy Carpenter, M.D., Oklahoma City  
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Stephen J. Adelson, M.D., Tulsa  
W. R. Schmieding, Ph.D., Oklahoma City  
Richard B. Price, M.D., Oklahoma City  
Gertrude Nielsen, M.D., Norman  
H. W. Wendelken, M.D., Miami  
Marcella R. Steel, M.D., Tulsa  
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John C. Kramer, M.D., Tulsa  
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Herschel J. Rubin, M.D., Tulsa  
Wm. L. Edwards, M.D., Duncan  
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Maternal Mortality Committee  
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Earl R. Muntz, M.D., Ada  
Houston F. Mount, M.D., Tulsa  
James McFarland, M.D., Bartlesville  
Wm. F. Crittendon, M.D., Norman  
James W. Hampton, M.D., Oklahoma City

Mrs. Richard E. Witt, Muskogee  
Medical Advisory Committee  
to State Board of Corrections  
Donald L. Cooper, M.D., Stillwater, Chairman  
Glen L. Berkenbile, M.D., Muskogee  
Wm. C. McCurdy, M.D., Purcell  
Joe E. Tyler, M.D., Tulsa  
Robert D. Grubb, M.D., Tulsa  
Jack D. Spencer, M.D., Oklahoma City

SECTION I  
INTRODUCTION

Your Council on Public Health and its Committees listed above are faced with a myriad of problems each year. It seems our responsibilities in this vital area continue to increase. The following reports indicate the adeptness of your Committees in handling their charge. The Council Chairman wishes to thank the Committee Chairmen and their members for their diligence and expertise.

SECTION II  
SPECIAL COUNCIL ACTIVITIES  
A. Interagency Council on Smoking and Health:



In 1964 our Association, in cooperation with other health agencies, helped organize and finance a Council on Smoking and Health. From 1964 through 1968 the Council's activities were funded by small public health grants and donations of time and money from its members. Last year, the Council received a modest HEW grant, through Oklahoma Regional Medical Program, to finance a plan of action designed to warn Oklahomans of the hazards of smoking. The results are gratifying; a Directory of Resource Materials on Smoking and Health was published and made available to educators, civic groups and others, and 982 requests were made for 8,226 films, brochures, posters and exhibits listed in the directory; two T.V. spots featuring Oklahoma sports figures were produced and received seven and one-half hours of public service time; physicians received 46,000 brochures for distribution through their offices, four college based workshops designed to prepare new teachers to aid in the anti-smoking effort were conducted; cigarette machines were removed from public buildings and Oklahoma cigarette sales took a noticeable dip. Probably the most encouraging success of all is the response to Council activities from Oklahoma's youth. A Youth Action Committee has been organized, made up of representatives from various youth organizations to advise the Council. Oklahoma's young people are aware of the hazards of smoking and today it is more popular to "kick the habit" than "light up."

*Recommendation:*

The Council on Public Health urges the continued support of the Inter-agency Council on Smoking and Health including financial assistance if needed and available.

*B. Automotive Crash Injury Research Program:*

For seven years association members have cooperated with the Department of Health, Hospital Association and Cornell Aeronautical Laboratory in gathering statistics on automobile injuries in Oklahoma. During that period data gathered have resulted in substantial changes in automobile design — padded dashboards, seat belts, improved door latches, energy absorbing steering wheels and windshield changes. In

addition, medical evidence is causing changes in emergency vehicles, mode of transportation and training of emergency medical personnel.

The last of the studies to be conducted in Oklahoma have just been completed in Creek, Tulsa, Wagoner, Muskogee, Cherokee and Adair counties. Oklahoma physicians deserve commendation for their role in securing this information over the seven year period; hopefully, auto manufacturers will utilize the information to make other design changes.

*Recommendation:*

This report is for informational purposes only.

*C. American College of Surgeons, Committee on Trauma (Oklahoma), Ex-Medical Corpsmen Retraining Proposal:*

During the early fall of 1969, the President of the association was contacted by a group of Tulsa surgeons to review a proposal for the retraining and use of ex-medical corpsmen. The object of the proposal is to utilize the ex-corpsmen in major medical facilities e.g., Intensive Care Units; Coronary Care Units; Burn Treatment Centers; Surgical and Orthopedic Units; and Emergency Rooms. Plans are to secure an HEW grant to finance (1) a period for planning, recruitment and the development of curriculum; and (2) a course of instruction and student stipend during the training period. The project proposal outlines a 13-week training program utilizing Tulsa physicians for the bulk of the instruction.

In December, the Tulsa County Medical Society's Board of Trustees endorsed the proposal. The OSMA Board of Trustees referred the matter to this Council on February 1, 1970.

Our Council studied the proposal in depth. Several important questions could not be adequately answered:

1. Eligibility requirements for entering the program.
2. Adequacy of the training program.
3. After employment, under whose jurisdiction the corpsmen work.
4. Potential vertical movement of the corpsmen.
5. Potential salary conflict with nursing profession.
6. Medical-Legal problems.

In addition to these questions, the Council was advised that the proposal had already been submitted to HEW via Senator Bellmon's office.

After several meetings with the sponsors, consultation with the Dean of the New School of Health Related Professions, the Council adopted the following statements:

1. OSMA recognizes the need for additional auxiliary medical personnel and recognizes the medical community's responsibility to assist in developing the training and curriculum of these personnel.

2. Programs designed to produce auxiliary medical personnel should be approved and supervised by the medical profession.

3. The New School of Health Related professions seems to be the logical place for the screening and administration of programs for the production of auxiliary medical personnel.

In specific response to the College of Surgeons Proposal, the Council suggested that the application for funds be limited to the planning period only and that the Advisory Committee membership, outlined in the proposal, include specific representation from the Nurses Association and OSMA.

The sponsors have agreed with these recommendations.

*Recommendations:*

1. The Council recommends the adoption of the three statements listed above.

2. That a special Advisory Committee be appointed to work with the School of Health Related Professions to review proposals for the training of auxiliary medical personnel and that this Committee have the authority to endorse proposals in the name of OSMA.

*D. Special Advisory Committee to the State Board of Corrections:*

As reported at the 1969 meeting, a special committee was appointed to study the medical care being rendered and the medical facilities at the State Penal Institutions. The committee met with members of the State Board of Corrections, prison officials, prison physicians and research physicians to gather information for their report. On site inspections were made of several facilities.

The committee made the following recommendations to the Board of Corrections:

1. Each prisoner upon arrival at the prison should have a complete examination which should include: a medical history, physical examina-



tion and laboratory workup with chest x-rays, V.D.R.L., C.B.C. and other screening tests desired. Routine immunization procedures should be incorporated at this time.

Special note: The committee feels very strongly that the laboratory facilities of the medical research commission should be utilized for as many of the above tests as possible, and for other laboratory procedures as necessary in the course of prisoner care.

2. A complete permanent and *confidential* medical record should be kept by the medical directory containing a copy of the laboratory report and test results of the aforementioned.

3. The classification committee should be furnished a medical information report from the medical director on each prisoner prior to the assigning of his prison program.

4. Ideally, the entrance physical would include basic psychological and psychiatric testing. The committee is aware that neither the facility nor the personnel are available for complete testing and feel that the Board of Corrections as a part of its long-range plan should incorporate into its medical program both facilities and personnel for these tests.

5. That a number of qualified nurses be hired to assist the medical director in carrying out his duties.

6. In order to assure the confidentiality and security of medical records, it is recommended that the medical director be provided with non-inmate secretarial help to handle medical records and routine office details.

7. That the medical director be provided with specialty consultation with the staff of the University Hospital and be granted the authority to secure specialty assistance, when the situation dictates, from local physicians and others who might be interested in helping. We suggest that the President of the Oklahoma State Medical Association be requested to encourage physicians located near prison locations to assist the prison medical staff when necessity dictates.

8. That additional medical corpsmen be hired to staff the first aid stations at Stringtown, Granite and McCloud either on a permanent basis (ideally) or on a rotating basis two or three times a week.

9. Within the long-range plan, the psychiatric facilities within the prison

need to be expanded and modernized with the ultimate goal of having a resident psychiatrist.

10. That the prison hospital facilities continue to be upgraded so that the majority of the medical care can be rendered inside the prison walls. The committee feels that this will assist in attracting more physicians to the facility.

11. That consideration be given the idea of constructing a maximum security ward at the University Hospital when it is necessary to refer patients to that institution.

A recent followup survey indicates that only a few of the recommendations have been implemented. A new physician has been added to the staff and the research facilities are being utilized to a greater extent. Hospital facilities have been improved to some degree, but not significantly.

*Recommendation:*

OSMA continue to work with the State Board of Corrections to improve medical facilities at Oklahoma prisons and that the President of the Association write letters as suggested in recommendation number seven above.

### SECTION III

#### COMMITTEE ON ALCOHOLISM

A new addiction problem of major proportions is confronting this committee — drugs. While Oklahoma has only a few of the manifestations of drug abuse compared with some other states, we are facing an ever increasing group of hard drug users. Federal and state governments are attempting to design programs to combat the problem and Governor Bartlett has conducted a successful Drug Abuse Conference. Your committee and the association's staff helped the Governor design his program and secured some of his speakers. The objective of the Conference was to (1) define the problem in Oklahoma, and (2) to draft recommendations for a dynamic comprehensive state program.

The summary submitted to the Governor as a result of the conference contained important recommendations: An analysis, review and updating of the state's drug laws; designate an established state agency as a clearing house and coordinating agent on narcotic and drug abuse information, education and research; the establishment of an advisory committee to assist the designated agency; comprehensive program of

education concerning the entire phenomenon of drug abuse, utilizing the communications media, specially trained personnel and a knowledgeable speakers bureau. The report also recommended an inventory of rehabilitation facilities.

Two months after receipt of the recommendations the Governor issued an Executive Order, establishing the Oklahoma Narcotics and Drug Abuse Council and appointing the Attorney General as its Chairman. Fifteen members will be appointed to the Advisory Council, one of which is Hayden Donahue, M.D., Chairman of OSMA Council on Public Health. The Committee hopes to work actively with the Council in its efforts to solve Oklahoma's drug abuse problem.

In addition to the above, a group of local physicians are supervising a rehabilitative type center in the Paseo Street area. This project, designed to provide a place for drug users to visit and receive information about facilities available to them, has only recently been opened. If this type project is successful, the Committee may consider encouraging their establishment in other areas.

A representative of your committee worked with a special sub-committee in preparing a directory of resources for the treatment of alcoholism in Oklahoma. The directory, available through the State Health Department, lists hospitals, guidance centers, community service projects, half-way houses, agencies and organizations providing treatment for the alcoholic. Members of the committee have made many speeches on alcoholism and drug abuse in cooperation with the Oklahoma County Mental Health Center.

*Recommendations:*

The committee recommends that OSMA continue an active program on alcoholism and drug abuse and that we cooperate with Governor Bartlett's Narcotic and Drug Abuse Council.

### SECTION IV

#### DISEASE SCREENING COMMITTEE

Multiphasic disease screening is fast becoming an acceptable means for the early detection of disease. Most Oklahoma programs are limited in nature and are being conducted by various allied health agencies, the Oklahoma Heart Association, the



Oklahoma Health Department and others. The committee recognizes the problems of health screening done outside the physicians' offices but also feels that properly done, this aid to diagnosis can be helpful to the physician in private practice.

The existing procedure for approval of a screening project requires county medical society approval prior to OSMA sanction. The committee feels this procedure should be continued. Most importantly, the committee feels that *any* mass disease screening program conducted in the state should be under the supervision of physicians.

At a recent committee meeting, officials of the State Health Department explained a comprehensive program they are conducting. The health screening, done annually on approximately 10,000 Oklahomans, is comprehensive and competently done, but to be of value requires accians. Test results are stored in a

computer for instant recall by the tive participation of practicing physi-patient's physician. A cooperative pilot project between a practicing physician and the Health Department is in process with the hope that results will produce more effective ways to utilize the data.

Since 1968 our Intersociety Committee on Multiphasic Health Screening with representatives from the American College of Radiology, American Academy of General Practice, American Society of Internal Medicine, American Association of Ophthalmology and the College of American Pathologists have worked to develop guidelines for meaningful health screening projects. A pilot program is now being conducted in Milwaukee in conjunction with county and state medical associations. The key to an effective program, apparently is physician control.

Recommendations:

1. The committee recommends that health screening programs in the state continue to be monitored by the

committee and that liaison with the Intersociety mentioned in this report be established.

2. That OSMA members approached for participation in Multiphasic health screening projects notify this committee so that proper monitoring can result.

SECTION V

COMMITTEE ON IMMUNIZATION

Certainly the most important activity of this committee was the successful "Rubella Sunday Campaign" conducted February 1, 1970. On that day 207,251 Oklahoma children between ages one and eleven received the vaccine. Previous campaigns conducted by the State Health Department increase that number by 50,000, or over 52% of Oklahoma children between ages one and eleven. It would be superfluous and much too lengthly to cite the many people and groups who were instrumental in this effort; the medical community has every right to be exceedingly proud of their exemplary role. The 257,251 children who were willing to take the shot to

RUBELLA

COUNTY	Number of Children Immunized	Total Cost of Vaccine	Total Receipts	(+, -)
ADAIR	1,016	1,422	\$1,074	— 348
ALFALFA	750	1,050	539	— 511
ATOKA	300	420		— 420
BEAVER	917	1,283		— 1,283
BECKHAM	878	1,229	2,146	+ 917
BLAINE	1,353	1,894	2,082	+ 188
BRYAN	407	569	788	+ 219
CADDO	2,369	2,316	3,030	— 286
CANADIAN	4,013	4,502	4,968	+ 466
CHEROKEE	1,504	2,105	1,052	— 1,053
CHOCTAW	374	523	183	— 340
CLEVELAND	8,287	11,601	10,600	— 1,001
COMANCHE-COTTON	6,381	8,933	5,788	— 3,145
CRAIG	975	1,365	109	— 1,256
CUSTER	2,313	3,238	3,638	+ 400
DELAWARE	1,645	2,303	470	— 1,833
DEWEY	282	394		— 394
ELLIS	674	943		— 943
GARFIELD	7,406	10,368	6,911	— 3,457
GARVIN	2,750	3,850	5,261	+ 1,411
GRADY	2,800	3,920	3,863	— 57
GRANT	615	861	1,023	+ 162
GREER	78	109		— 109
HARMON	81	113		— 113
HARPER	502	702	899	+ 197
HUGHES	1,196	1,674	957	— 717
JACKSON	510	714	176	— 538
JEFFERSON	611	855	514	— 341
JOHNSTON	242	338	108	— 230
KAY	4,562	6,386	7,271	+ 885
KINGFISHER	1,688	2,363	2,563	+ 200
KIOWA	460	644	415	— 229
LATIMER	208	291	44	— 247
LeFLORE	2,712	3,796	1,276	— 2,520
LINCOLN	2,131	2,990	3,073	+ 83
LOGAN	2,038	2,855	2,639	— 216
McCLAIN	1,255	1,757	1,545	— 212
McCURTAIN	1,557	2,179	1,209	— 970
McINTOSH	1,006	1,408	457	— 951
MAJOR	491	687	1,621	+ 934
MARSHALL	149	208	32	— 176
MAYES	1,618	2,265	1,300	— 965
NOBLE	1,158	1,621	2,082	+ 461
NOWATA	144	201	33	— 168
OKFUSKEE	1,362	1,906	1,211	— 695
OKLAHOMA	56,995	79,800	71,456	— 8,344
OKMULGEE	2,799	3,918	25	— 3,893
OSAGE	1,582	2,214	2,238	+ 24
OTTAWA	2,145	2,903	2,693	— 210
PAWNEE	500	700	45	— 655
PAYNE	3,664	5,129	6,633	+ 1,504
PITTSBURG	2,550	3,570	2,034	— 1,536
PONTOTOC	1,990	2,786	299	— 2,487

POTTAWATOMIE	2,540	3,556	937	— 2,619
ROGER MILLS	387	541		— 541
ROGERS	2,342	3,278	1,154	— 1,124
SEMINOLE	1,210	1,694	456	— 1,238
SEQUOYAH	941	1,317	1,067	— 250
STEPHENS	3,533	4,946	5,545	+ 599
TEXAS	1,056	1,478	275	— 1,203
TILLMAN	1,180	1,695		— 1,659
TULSA	43,903	61,464	37,327	—24,137
WAGONER	1,000	1,400	559	— 841
WASHINGTON	482	674	1,431	+ 757
WASHITA	700	980	1,253	+ 273
WOODS	1,518	2,125	2,788	+ 663
WOODWARD	461	645	1,235	+ 590
				DEFICIT 66,528
Less Vaccine Donated by State Health Department				8,500
				TOTAL DEFICIT \$58,028

Exhibit 3  
RUBELLA REPORT  
April 28, 1970

Deposited through April 28, 1970	\$239,713.41
Returned checks through April 28, 1970	198.00
	\$239,515.41
Charge by Bank on "Exchange check"	.05
	\$239,515.36
Paid to Philips Roxane Laboratories (for vaccine)	237,000.00
	\$ 2,515.36
Total cost of vaccine	\$280,000.00
All known credits	254,475.48*
	\$ 25,524.52

\*State Health Department has received  
Credit Memo No. 4-0644, dated 4-14-70  
for returned vaccine in the amount of \$13,649.72  
\*Department of Public Welfare Claim-Balance  
Due of \$1,310.40



RUBELLA IMMUNIZATION STATUS  
STATE OF OKLAHOMA  
MARCH 1, 1970

TABLE 2

COUNTY	Number of Children Age 1-5	Number of Children Immunized Age 1-5	Percent	Number of Children Age 6-11	Number of Children Immunized Age 6-11	Percent	Number of Children Age 1-11	Number of Children Immunized Age 1-11	Percent
Roger Mills	179	141	79%	277	246	89%	456	387	85%
Ellis	314	193	61%	477	471	99%	791	664	84%
Pottawatomie*	2811	1625	58%	4842	4735	98%	7653	6360	83%
Woods	735	617	84%	1133	901	80%	1868	1518	81%
Murray*	665	429	65%	1205	1046	87%	1870	1475	79%
Woodward*	1117	720	64%	1972	1674	85%	3089	2394	78%
Seminole*	1852	1181	64%	3049	2634	86%	4901	3815	78%
Beaver	467	224	48%	719	693	96%	1186	917	77%
Greer*	401	253	63%	650	556	86%	1051	809	77%
Johnston*	542	309	57%	995	831	84%	1537	1140	74%
Grant	443	252	57%	611	513	84%	1054	765	73%
Kiowa*	911	462	51%	1465	1283	88%	2376	1745	73%
Alfalfa	468	251	54%	577	499	86%	1045	750	72%
Garfield	4544	2942	65%	6111	4464	73%	10,655	7406	70%
Harmon*	327	210	64%	598	424	71%	925	634	69%
Carter*	2845	1369	48%	4636	3724	80%	7481	5093	68%
Logan	1137	806	71%	1909	1232	65%	3046	2038	67%
McCurtain*	2296	1152	50%	3831	2867	75%	6127	4019	66%
Jackson*	3193	1448	45%	4348	3469	80%	7541	4917	65%
Noble	780	448	57%	1087	768	71%	1867	1216	65%
Bryan*	1589	852	54%	2546	1815	71%	4135	2667	64%
Muskogee*	4775	1776	37%	7390	6015	81%	12,165	7791	64%
Canadian	2454	1472	60%	3927	2541	65%	6381	4013	63%
Garvin	1643	891	54%	2753	1895	69%	4396	2786	63%
Custer	1280	933	73%	2401	1380	57%	3681	2313	63%
Kingfisher	1219	721	59%	1578	967	61%	2797	1688	60%
Okfuskee	863	544	63%	1399	818	58%	2262	1362	60%
Nowata*	701	355	51%	1151	749	65%	1852	1104	60%
Lincoln	1387	793	57%	2243	1343	60%	3630	2136	59%
Haskell*	596	295	49%	1116	686	61%	1712	981	57%
Atoka*	692	299	43%	1157	744	64%	1849	1043	56%
Blaine	936	523	56%	1409	780	55%	2345	1303	56%
Hughes	830	501	60%	1297	695	54%	2127	1196	56%
Jefferson	374	280	75%	725	331	46%	1099	611	56%
Washington*	3490	1373	39%	5023	3304	66%	8513	4677	55%
Choctaw*	1125	381	34%	1791	1198	67%	2916	1579	54%
Stephens	2572	986	38%	4012	2547	63%	6584	3533	54%
Tulsa	33,591	17,461	52%	48,074	26,272	55%	81,665	43,733	54%
Oklahoma	42,651	22,434	53%	63,675	34,561	54%	106,326	56,995	54%
Marshall*	437	150	34%	884	560	63%	1321	710	54%
Kay	3682	1613	44%	5097	2949	58%	8779	4562	52%
Latimer*	562	232	41%	831	487	59%	1393	719	52%
Creek*	3518	1007	29%	5612	3647	65%	9130	4654	51%
Delaware	1176	631	54%	2098	1014	48%	3274	1645	50%
Grady	2159	1090	50%	3418	1710	50%	5577	2800	50%
Pontotoc	1822	908	42%	2999	1512	41%	4821	2420	50%
Cleveland	6603	3140	48%	10,161	5147	51%	16,764	8287	49%
McClain	973	417	43%	1701	838	49%	2674	1255	47%
Coal*	313	70	22%	633	369	58%	946	439	46%
McIntosh	820	409	50%	1374	597	43%	2194	1006	46%
Love*	408	96	24%	639	372	58%	1047	468	45%
Tillman	1026	319	31%	1579	861	55%	2605	1180	45%
Okmulgee	2553	1145	45%	3759	1654	44%	6312	2799	44%
Osage	1802	613	34%	1866	969	52%	3668	1582	43%
Craig	946	423	45%	1613	644	40%	2559	1067	42%
LeFlore	2503	1079	43%	3947	1633	41%	6450	2712	42%
Ottawa	1964	606	31%	3225	1539	48%	5189	2145	41%
Caddo	2300	1023	44%	3791	1346	35%	6091	2369	39%
Mayes	1492	594	40%	2639	1024	39%	4131	1618	39%
Rogers	2210	1035	47%	3961	1307	33%	6171	2342	38%
Cherokee	1429	601	42%	2485	903	36%	3914	1504	38%
Major	518	176	34%	821	315	38%	1339	491	37%
Payne	3143	1065	34%	3949	1566	38%	7092	2631	37%
Pittsburg	2752	932	34%	4257	1607	38%	7009	2539	36%
Pushmataha*	750	129	17%	1194	577	48%	1944	706	36%
Beckham	930	328	35%	1621	550	34%	2551	878	34%
Texas	1116	343	31%	2087	713	34%	3203	1056	33%
Wagoner	1160	391	34%	1950	609	31%	3110	1000	32%
Adair	1193	390	33%	2153	626	29%	3351	1016	30%
Pawnee	669	199	30%	1096	301	27%	1765	500	28%
Comanche	10,151	2268	22%	12,914	3865	30%	23,065	6133	27%
Dewey	415	108	26%	643	174	27%	1058	282	27%
Harper	402	125	31%	628	125	20%	1030	250	24%
Washita	1358	260	19%	1881	440	23%	3239	700	22%
Cotton	448	84	19%	715	164	23%	1163	248	21%
Sequoyah	2055	436	21%	3410	505	15%	5465	941	17%
Cimarron	386	Refused to Participate		505	-----	-----	891	-----	-----
STATE TOTAL	196,939	92,337	47%	298,300	164,890	55%	495,239	257,227	52%

\* School by School Rubella Immunization Program held before or after "Rubella Sunday" February 1, 1970  
The 1-5 population estimate is based on the pre-school census June 1967 (Oklahoma State Department of Education.)  
The 6-11 population estimate is based on the School Census, October 1969 (Oklahoma State Department of Education.)

Oklahoma State Health Department  
Immunization Program  
March, 1970



protect future generations have a right to be proud. The thousands of people who donated, (to date) \$254,475.48 to help pay for the vaccine have every right to be proud.

The exhibits attached to this report represent a thorough analysis. Exhibit Number 1 is a breakdown of children immunized on a county basis and by age group. The Committee's goal was to achieve a 50% immunization level in *each county*. While the 52% statewide level is above our expectation, there are still counties that need to raise their immunity level. Exhibit Number 2 is a county breakdown of vaccine given and funds collected. The committee is asking each county to attempt to raise funds to pay for their vaccine. Exhibit Number 3 is the current financial status of the campaign. The drug manufacturer has given us until January, 1971 to complete payment. There are still sources that we feel will provide funds to erase the deficit. Exhibit Number 4 is a letter from President Nixon.

In addition to the Rubella campaign, your committee supported passage of legislation that would require children entering school for the first time to show evidence of basic immunizations or immunity tests. This legislation has passed and has been signed by Governor Bartlett.

A new immunization schedule has been drafted by the committee and will be reproduced and distributed in the near future.

The Health Department has continued its statewide immunization program on epidemiological diseases, however, a reduction in funds available for vaccines has curtailed their program to some degree. In 1968-69 the Department gave 128,290 doses of Polio and in 69-70 only 48,570. In the same period in 68-69, there were 53,260 Rubeola shots given, compared to 14,425 in the same 69-70 period.

While the committee feels that the new immunization law will cover many children heretofore not immunized there is still a need for an aggressive Health Department Program. In checking immunity levels in each county on the five basic diseases: Smallpox, Polio, DPT, Rubeola and Rubella, levels are gratifyingly high. An excellent commentary for the Health Department; however, the committee wishes to continue these

high levels and improve them by working closely with the Department.

#### Recommendations:

The committee recommends continuance of good immunization programs.

### EXHIBIT 4 COPY THE WHITE HOUSE WASHINGTON

April 24, 1970

The leadership of the Oklahoma State Medical Association and the Oklahoma State Health Department in your recent Rubella campaign is most impressive. The encouraging results of your program, so strongly supported by school groups and civic organizations, will surely help to protect future generations against birth defects caused by this disease.

You set an inspiring example for all your fellow citizens — and one that I hope will be widely followed and successfully imitated.

S/S Richard Nixon

### MORTALITY SECTION VI

#### COMMITTEE ON MATERNAL

Maternal Mortality reports in Oklahoma indicate that a number of maternal deaths could be prevented if an adequate supply of whole blood was available in Oklahoma hospitals.

A recent survey of 156 of the state's 160 hospitals reveals that 38 licensed facilities do *not* have a whole blood supply readily available. The relative short shelf life and proper supply seems to be the major problem. Members of your committee have met with representatives of the Red Cross to work on supply arrangements for the "have not" facilities. The prospects for solving this unnecessary inequity are good.

Your committee also works with the State Health Department reviewing case files on reported maternal deaths. The object of these reviews is to recommend corrective preventive measures.

#### Recommendations:

1. Your committee urges OSMA members to continue to report maternal deaths promptly to the Oklahoma Department of Health

2. That OSMA continue to support this committee's effort to establish adequate blood supplies in Oklahoma hospitals, which will be readily available.

Report of the  
COUNCIL ON RURAL MEDICINE  
(APPROVED)

#### Council Members

Wm. C. McCurdy, M.D., Chairman, Purcell  
The Honorable Ernest Martin, State Senator, Ardmore  
The Honorable Wiley Sparkman, State House of Representatives, Grove  
Mr. Ken Hagar, Executive Director, Oklahoma Health Careers Council, Oklahoma City  
Tom Points, M.D., O.U. Medical Center, Oklahoma City  
Mr. Jack Boyd, Director, Oklahoma Health Planning Agency, Oklahoma City  
Dale Groom, M.D., O.U. Medical Center, Oklahoma City  
Phil Smith, Sc.D., O.U. Medical Center, Oklahoma City  
Mr. Cleve Rodgers, Executive Director, Oklahoma Hospital Association, Tulsa  
Ed Young, M.D., El Reno  
Roger Lienke, M.D., O.U. Medical Center, Oklahoma City  
James L. Dennis, M.D., Vice Chmn., Vice President, O.U. Medical Center, Oklahoma City  
A. B. Colyar, M.D., Commissioner, State Health Department, Oklahoma City  
Mr. Walt Whitlow, Associate, American College of Surgeons Committee on Trauma (Oklahoma), Tulsa  
Joe Duer, M.D., Woodward  
Robert Hogue, M.D., Guthrie  
Mr. Ken McFall, Executive Director, Oklahoma Farm Bureau, Oklahoma City  
Thomas Rhea, M.D., Idabel  
Jack Fetzer, M.D., Woodward  
Ben Blackstock, Executive Director, Oklahoma Press Association, Oklahoma City  
Charles Tefertiller, M.D., Altus  
Richard Stansberry, M.D., State Senator, Oklahoma City  
Ernest Shadid, M.D., Norman  
For several years, the medical manpower shortage in certain areas of Oklahoma has caused concern in the medical community and general public. Physicians, like other professionals are not inclined to practice in the remote and needy areas of the state. Social, economic and environmental factors have influenced the physician's decision not to return to, or to leave these areas. Hardest hit are Oklahoma's rural communities; during the past ten years, the state's physician population has risen by 938 members, or 36% of the 1959 base. During the same period, Okla-



homa communities with populations of under 10,000 lost 102 physicians, or 18% decrease of their 1959 total. While accessibility to, and the quality of rural health facilities has been significantly improved, this loss is still alarmng.

Citizen groups have made frustrating attempts to lure young physicians to their area—community hospitals have been constructed that sit idle, promises of clinics and guaranteed salaries are consistent and repetitious promises — usually with little results.

Governmental agencies are encouraging the re-training and use of ex-medical corpsmen, nurses and other allied health personnel in an effort to produce “physician-type assistants,” and there is constant pressure on the medical schools of this country to increase student enrollment with little accompanying financial assistance. These problems are not unique to Oklahoma—they are nationwide.

In an attempt to find some solutions, the Board of Trustees authorized a special OSMA Council to study the problems of medical care in rural Oklahoma. As you can see from the membership of the Council, there are representatives outside the medical community. The Council felt that these problems are multi-faceted and required the expertise of members outside our ranks. Our goals are to (1) determine the health manpower needs of Oklahoma, (2) draft conclusions on how these needs can best be met, and (3) make recommendations to various agencies, associations and governmental bodies on how best to solve the problems, keeping in mind that health problems are usually best solved by physicians or by persons, health aids or organizations that are acting under the full supervision of physicians.

The first task was to secure meaningful data. Utilizing the resources of the Medical School's Health Intelligence Facility, a physician distribution map was prepared for the Council. Population comparisons were made and areas of deficiency became obvious. In addition, the Council surveyed county society presidents for their estimate of needed physicians and bonafide practice opportunities. The results of this survey are being analyzed.

It is obvious that we cannot complete our work in a short time, however, there are already encourag-

ing signs. The legislature has passed a bill providing financial incentives to students willing to practice in rural areas. Several students have already applied for these loans, which will become grants if they stay the required time in the smaller areas. A committee of the association has submitted a similar proposal to this House of Delegates.

Other organizations are contacting this Council on proposals that are designed to aid in solving the health manpower problems.

A proposal by the American College of Surgeons Committee on Trauma (Oklahoma) was presented at the last meeting of this Council. This proposal, outlined further in the Council on Public Health report, was referred to a special sub-committee for evaluation. While the Committee has not made a report to the Council, since we have not recently met, it is our understanding that the sub-committee looked favorably upon the proposal.

There is still much work to be done, but we are making progress.

*Recommendations:*

This is an information report, however, we urge OSMA support of this Council's activities and request the House of Delegates' approval of the Financial Aid to Education report and recommendations, which will channel additional funds into loans for medical students agreeing to practice in needy areas.

**Substitute Resolution No. 1**

*(Approved)*

SUBMITTED BY: Oklahoma Delegation

TITLE: AMA Postgraduate Education Program

REFERRED TO: Reference Committee No. I

WHEREAS, the American Medical Association has established a Voluntary Postgraduate Educational Award; and

WHEREAS, the AMA has agreed to recognize the longstanding recertification postgraduate education program of the American Academy of General Practice in respect to qualifying for its award; and

WHEREAS, the AAGP and its state affiliates desire that their policy to recertify members on the basis of meeting educational requirements should be accepted by the AMA without the burden of providing each member with a record of his postgraduate hours;

NOW, THEREFORE, BE IT RESOLVED, that the AMA take the initiative to establish liaison with the American Academy of General Practice to develop appropriate procedures to coordinate the work of the two associations in an equitable manner which will relieve the administrative problems of the AAGP and its affiliates.

**Resolution No. 2.**

*(TABLED)*

SUBMITTED BY:

Jack W. Parrish, M.D.

Charles L. Johnson, M.D.

Harold Stout, M.D.

W. A. Heflin, M.D.

O. J. Morgan, M.D.

Elton W. LeHew, M.D.

Henry C. Smith, M.D.

William A. Matthey, M.D.

Kenneth W. Whittington, M.D.

Martin H. Andrews, M.D.

Leonard R. Diehl, M.D.

E. Cotter Murray, M.D.

Garland L. Parks, M.D.

Cooper D. Ray, M.D.

David L. McAllister, M.D.

Thomas W. Coale, M.D.

Orby L. Butcher, M.D.

D. D. Leatherman, M.D.

Chester R. Seba, M.D.

William G. Bernhardt, M.D.

Louis C. Floyd, M.D.

Irwin C. McLendon, M.D.

Marvin B. Glismann, M.D.

G. Leroy Goodman, M.D.

Marion C. Wagnon, M.D.

Marie T. Lane Snow, M.D.

Craig-Delaware-Ottawa County Medical Society

Washington-Nowata County Medical Society

TITLE: Title XIX Agreement

REFERRED TO: Reference Committee No. III.

WHEREAS, the Director of the Department of Public Welfare of the State of Oklahoma recently submitted to each physician a form to be signed and returned to him in order to be continued to be paid as a vendor of medical care for patients under Title XIX; and

WHEREAS, there are physicians who feel that some of the requests made in said form are oppressive, unrequired and not in the best interest of patients and physicians; and

WHEREAS, the members of the Oklahoma Chapter of the American Academy of General Practice would like to express their determination to continue the care of all patients, regardless of the method of payment;



and

WHEREAS, it is known that the majority of physicians have abided by the laws set forth by Congress and the regulations set forth by the Department of Health, Education and Welfare; and

WHEREAS, it is believed that signing the aforementioned forms could leave the physician in a position of being unable to negotiate his relationship with the Department of HEW for all times; and

WHEREAS, it has been determined that the regulation is specific only in that it requires the physician to sign his name to a statement that he is aware of the regulation and its ramifications, when he accepts funds from the Federal Government;

NOW, THEREFORE, BE IT RESOLVED, that the undersigned respectfully petitions the Oklahoma State Medical Association to ask the Director of the Department of Public Welfare of the State of Oklahoma to rescind the aforementioned form and submit to the physicians a new form which asks the physician to be aware of his obligation.

**Resolution No. 3.**

(APPROVED)

SUBMITTED BY: Tulsa County Delegation

TITLE: Extension of Junior Membership to Hospital Residents

REFERRED TO: Reference Committee No. I.

WHEREAS, the imposition of membership dues is frequently a hardship upon hospital residents, which deters them from joining the Oklahoma State Medical Association; and

WHEREAS, such dues are frequently paid by the hospital or a non-profit residency training trust, and thus become an item in the cost of hospital care; and

WHEREAS, Residents would benefit from the facilities and resources afforded by membership in the Oklahoma State Medical Association, would become eligible for consideration for participation in the OSMA group program of professional liability insurance, and would be welcomed into organized medicine at an early stage of their professional careers;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association enact the following amendments to the bylaws, which

shall have the effect of providing dues-exempt Junior Membership to hospital residents of Oklahoma.

PROPOSED AMENDMENTS TO THE BYLAWS, OKLAHOMA STATE MEDICAL ASSOCIATION, TO PROVIDE JUNIOR MEMBERSHIP FOR HOSPITAL RESIDENTS:

CHAPTER I, Section 2.02 of the Bylaws shall be amended to read as follows:

"2.02. ACTIVE DUES-EXEMPT MEMBERS. Active members of the association who are excused partially or wholly from the payment of dues, in accordance with Chapter II, Sections 1.031 (b), and 1.032. (a) and (b), shall have the full privileges of association membership, including the rights to vote and hold office."

CHAPTER II, Section 1.032 of the Bylaws shall be amended to read as follows:

"1.032. PARTIAL EXEMPTION. The following classifications of members shall be partially exempt from payment of dues and assessments, according to the terms prescribed: (a) Physicians who have been engaged in the practice of medicine less than one year since the completion of hospital training may, at the election of the component society, be assessed one-half of the amount of regular dues and/or assessments for their first year of association membership. Such members have the full rights and privileges of association membership during this period of partial exemption; (b) Upon the judgment of the component society, and with the approval of the Board of Trustees, physicians with financial or other sufficient reasons may be assessed one-half of the amount of regular dues and assessments. Such members have the full rights and privileges of association membership. CHAPTER I, Section 2.05 of the Bylaws shall be amended to read as follows:

"2.05. JUNIOR MEMBERS. Physicians serving as full-time interns or residents, upon application of the component society, may become Junior Members of the component society and of this association. Membership in this classification is limited to the period of training."

**Resolution No. 4.**

(TABLED)

SUBMITTED BY: Kingfisher County Medical Society

TITLE: Ethical Non-compliance With Onerous Government Regula-

tions.

REFERRED TO: Reference Committee No. III.

WHEREAS, the Oklahoma State Medical Association recognizes that the practice of good medicine requires a personal contract between patient and physician that cannot be subsumed by government; and

WHEREAS, the Oklahoma Department of Public Welfare has brought forth form MA-S-96, which intrudes into the freedom and privacy of patients and physicians; and

WHEREAS, this coercive intrusion is not based on allegations of improper treatment, but seems designed to further administrative despotism;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association inform the Secretary of Health, Education and Welfare through the Oklahoma Department of Public Welfare that the physicians of Oklahoma may properly and ethically elect to refuse to sign form MA-S-96 or any other agreement which abridges the personal contract between patient and physician.

BE IT FURTHER RESOLVED, that the Oklahoma State Medical Association respectfully requests these government agencies to develop case-processing methods which do not require clerical work by physicians.

**Resolution No. 5.**

(DISAPPROVED)

SUBMITTED BY: Edward K. Norfleet, M.D.

TITLE: Revocation of UCR Endorsement

REFERRED TO: Reference Committee No. III.

WHEREAS, the House of Delegates of the Oklahoma State Medical Association has endorsed the principle of the Usual, Customary and Reasonable concept; and

WHEREAS, many of the insurance carriers have interpreted this endorsement as being a total commitment on the part of the medical association; and

WHEREAS, some of the members of the association are being clubbed to death by this liberal interpretation; and

WHEREAS, the Oklahoma State Medical Association was never founded to be used as an instrument by the insurance companies; and

WHEREAS, even the endorsement of the principle of the Usual, Customary, and Reasonable concept is



untenable at this time;

NOW, THEREFORE, BE IT RESOLVED, that the endorsement of the principle of the Usual, Customary, and Reasonable concept be considered invalid henceforth.

**Resolution No. 6.**  
(DISAPPROVED)

SUBMITTED BY: Edward K. Norfleet, M.D.

TITLE: Resignation of Officers from Blue Shield Board

REFERRED TO: Reference Committee No. III.

WHEREAS, the Oklahoma Blue Shield Plans were formed with the help of distinguished members of the medical profession; and

WHEREAS, the cooperation of organized medicine with the Plans have caused the Plans to prosper to the mutual benefit of the Plans and organized medicine; and

WHEREAS, the Plans' constitution and bylaws reflect that such Plan is to have an equal number of physicians and lay people on its governing board and such physicians are to be duly licensed as physicians in the Great State of Oklahoma; and

WHEREAS, the Plans have placed dentists on the governing board in the place of physicians; and

WHEREAS, the Oklahoma State Medical Association recognizes that dentistry is a noble and honorable profession; nevertheless, dentists are not physicians and the American Medical Association has noted that dentists are limited practitioners; and

WHEREAS, the Oklahoma State Medical Association has pleaded and petitioned and prayed to the Blue Shield Plans' trustees that the dentists be replaced by physicians; and

WHEREAS, such pleadings, petitions and prayers have been for naught; and

WHEREAS, some of the general officers of the Oklahoma State Medical Association serve as Trustees of the Oklahoma Blue Shield Plans; and

WHEREAS, such service obviously represents a conflict of interest at this point;

NOW, THEREFORE, BE IT RESOLVED, that the general officers of the Oklahoma State Medical Association be encouraged to resign from their positions as Trustees of the Blue Shield Plans.

**Resolution No. 7.**  
(DISAPPROVED)

SUBMITTED BY: Edward K. Nor-

fleet, M.D.

TITLE: Basement Area

REFERRED TO: Reference Committee No. I.

WHEREAS, the Oklahoma State Medical Association through its House of Delegates has authorized the construction of additional office space; and

WHEREAS, it was noted that such construction was to be used for office personnel and for storage space; and

WHEREAS, it was initially thought that such construction would not require an increase in dues; but

WHEREAS, there has been demonstrated a necessity for increasing dues; and

WHEREAS, authorization was given to solicit voluntary contributions to tastefully furnish a room in the basement for the meeting together of the wives and various members of the association; and

WHEREAS, it has now been ascertained that some of these funds have been used to build a common garden variety bar room with storage space for containers of distilled spirits; and

WHEREAS, the Board of Trustees has previously deemed it unwise to have distilled spirits on the premises of property belonging to the state association;

NOW, THEREFORE, BE IT RESOLVED, that a select committee be formed to discover who authorized the construction of this den of iniquity, what its future purpose is to be, and how it will aid in the successful completion of the continuing mission of the Oklahoma State Medical Association.

**Resolution No. 8.**  
(NO ACTION)

SUBMITTED BY: Edward K. Norfleet, M.D.

TITLE: Himler Report

REFERRED TO: Reference Committee No. III.

WHEREAS, the Committee on Planning and Development has submitted its report for further consideration at the Annual Meeting of the American Medical Association; and

WHEREAS, this report has been divided into two sections, the Himler Report (Majority) and the Budd Report (Minority); and

WHEREAS, the Oklahoma State Medical Association is not enchanted with much of the report; and

WHEREAS, it is felt that the Budd Report contains many items that

would make the entire report more palatable to its members;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association go on record as endorsing all of those items contained in the Budd Report and request that this be included in the final draft of the aforementioned report.

**Resolution No. 9.**  
(APPROVED)

SUBMITTED BY: Edward K. Norfleet, M.D.

TITLE: Annual Meeting Registration Fee

REFERRED TO: Reference Committee No. I.

WHEREAS, the Board of Trustees has elected to charge a registration fee for those who attend the annual meeting of the Oklahoma State Medical Association; and

WHEREAS, such registration fee can only be construed as a fee, as dues, or as an assessment; and

WHEREAS, there have been several dues increases both at the state and at the county level in recent years; and

WHEREAS, there is no budgetary deficit at this time; and

WHEREAS, the Constitution and Bylaws of the Oklahoma State Medical Association reveals that the power to levy dues, fees, and assessments is specifically reserved for action by the House of Delegates; and

WHEREAS, the House of Delegates is grieved by this action by the Board of Trustees; and

WHEREAS, the need for such a fee may be outlined to the House of Delegates in the next budget;

NOW, THEREFORE, BE IT RESOLVED, that the registration fee be rendered invalid at this time.

BE IT FURTHER RESOLVED, that such fees collected to this date be returned to the various members of the association.

**Resolution No. 10.**  
(APPROVED)

SUBMITTED BY: Board of Trustees

TITLE: Oklahoma Regional Medical Program

REFERRED TO: Reference Committee No. I.

WHEREAS, the University of Oklahoma Medical Center is the coordinating authority for the Oklahoma Regional Medical Program; and

WHEREAS, the purpose of this program is to shorten the time between the discovery or development



of new medical principles, theories and techniques and their clinical application; and

WHEREAS, ORMP has established an operational structure which involves close and effective liaison with practicing physicians; and

WHEREAS, both the purpose and the operational mechanism are in keeping with medicine's goal to actively participate in the continuing quest for scientific advancement; and

WHEREAS, many worthwhile projects are now underway in Oklahoma as a result of cooperation between the ORMP staff and representatives of organized medicine;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association believes the Oklahoma Regional Medical Program merits the continued interest and support of the association and its component societies.

BE IT FURTHER RESOLVED, that ORMP and Comprehensive Health Planning represent separate and distinct efforts — one to nurture scientific advancement and one to plan the delivery of health services—and the Oklahoma State Medical Association opposes congressional efforts to amalgamate these activities.

**Resolution No. 11.**

(APPROVED)

SUBMITTED BY: Hillard E. Denyer, M.D.

TITLE: In Appreciation of Armais Arutunoff

REFERRED TO: Reference Committee No. I.

WHEREAS, Armais Arutunoff, born and educated a citizen of Russia, having obtained degrees and status as an Electrical Engineer in Russia, invented and developed the first submersible electric motor and submersible pump; and

WHEREAS, Mr. Arutunoff, finding a lack of freedom in Russia, had the wisdom and foresight to leave Russia and eventually bring his invention, talents and family to the United States of America under most difficult circumstances; and

WHEREAS, since his arrival, Mr. Arutunoff became a citizen of the United States of America and now resides in the City of Bartlesville, Washington County, State of Oklahoma; and

WHEREAS, since his arrival has further developed, improved and

most successfully created Reda Pump Company to manufacture and distribute the Reda submersible electric motor and pump world-wide; and

WHEREAS, during this busy and successful business career, Mr. Arutunoff devoted many long, tedious hours and much of his personal wealth toward promoting the education of the ideals and principles of the United States of America and the system of free enterprise versus the philosophy of the Soviet Union; and

WHEREAS, the City of Bartlesville, Washington County and the State of Oklahoma has seen fit to honor and recognize these efforts by designating May 23rd as "Arutunoff Day";

NOW, THEREFORE, BE IT HEREBY NOTED, the members of Washington-Nowata County Medical Society wish to hereby express their most sincere appreciation to Mr. Arutunoff for his enduring and tireless efforts in promoting the cause of Freedom.

This action was unanimously approved by those physicians present at the regular monthly meeting of the Washington-Nowata County Medical Society, April 8, 1970, and direction was given to publicly display this action and to request the Oklahoma State Medical Association to introduce this action to the annual meeting of the Oklahoma State Medical Association for further recognition and appreciation by the physicians of the State of Oklahoma.

**Resolution No. 12.**

(DISAPPROVED)

SUBMITTED BY: Edward K. Norfleet, M.D.

TITLE: Liaison With Blue Shield

REFERRED TO: Reference Committee No. III.

WHEREAS, the Oklahoma State Medical Association has enjoyed a pleasant and fruitful relationship with the Oklahoma Blue Shield Plans for many years; and

WHEREAS, there has existed a medical advisory committee to the Blue Shield Plans for adjudication of claims; and

WHEREAS, this committee has been composed mainly of physicians from the Tulsa County Medical Society for many years; and

WHEREAS, this committee has served in a commendable and unselfish manner without remuneration for

these many years; and

WHEREAS, there has been no vocal complaint regarding this committee from the Blue Shield Plans nor organized medicine; and

WHEREAS, the Blue Shield Plans "sacked" this committee in a unilateral, arrogant, and capricious manner without dialog with the Tulsa County Medical Society nor with its parent organization, the Oklahoma State Medical Association; and

WHEREAS, the Blue Shield Plans have formed new adjudication committees for reasons largely unfounded on fact and known mostly to the Blue Shield Plans; and

WHEREAS, this action opens old wounds and creates new wounds in regard to relationships between the Tulsa County Medical Society and the Blue Shield Plans;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association inform the Blue Shield Plans of its displeasure at this unilateral action on the part of the Blue Shield Plans.

BE IT FURTHER RESOLVED, that the Blue Shield Plans be encouraged to utilize the Oklahoma State Medical Association's Liaison Committee regarding further actions that might affect the role of organized medicine.

**Resolution No. 13.**

(APPROVED AS AMENDED)

SUBMITTED BY: Oklahoma County Medical Society

TITLE: Oral Contraceptive Leaflet  
REFERRED TO: Reference Committee No. IV.

WHEREAS, the Commissioner of the Food and Drug Administration, Charles Edwards, M.D., has been reported to have endorsed a patient-warning leaflet to be a required insert in every package of oral contraceptive medication; and

WHEREAS, this proposed leaflet is purported to have paragraphs with the headings: "A Warning About Blood Clots," "Who Should Not Take Birth Control Pills," "Special Problems," "What to Expect," "Other Reactions to Oral Contraceptives," "Possible Reactions," "Note About Cancer," written in a degree of detail which, while medically accurate, is neither appropriate nor necessary information for the patient to have without proper guidance by her physician to assist her in interpretation; and

WHEREAS, most patients rely on



their doctor's judgement as to whether to and how they should take any medication; and

WHEREAS, insofar as oral contraceptives are concerned, the physician should advise the patient of both the advantages and disadvantages of this method of contraception, as well as any other method, and must be the final judge of the information necessary for the patient, and how it is presented, based on total consideration of the patient's status and contraceptive needs; and

WHEREAS, the individual judgement of the physician being paramount, there are instances in which the physician may not feel that the entire contents of the proposed leaflet should be related to the patient by the physician, as implied in the same leaflet, or that it would be wise to tell the patient about all the details of the leaflet, in which case later complications might result in medical damage suits against physicians, based on the advice of the leaflet; and

WHEREAS, considering all the potent drugs now used with side-effects and complications thereby inherent, the implications of the decision of the FDA to insert a warning leaflet with each packet of oral contraceptives becomes ominous;

WHEREAS, the IPPC and other organizations have condemned the FDA for the proposed warning leaflet,

NOW, THEREFORE, BE IT RESOLVED, that OSMA is opposed to any agency of the Federal Government interfering in the practice of medicine to the extent of the proposed warning leaflet; and

BE IT FURTHER RESOLVED, that a copy of this resolution be submitted to the Commissioner of FDA and to the Oklahoma Delegation to Congress.

#### **Substitute Resolution No. 14.**

(APPROVED)

SUBMITTED BY: Oklahoma County Medical Society

TITLE: Title XIX Agreement

REFERRED TO: Reference Committee No. III.

WHEREAS, the provider agreement, known as Form MA-S-96, is not necessary in order for the Department of Public Welfare of the State of Oklahoma to comply with the provisions of Title XIX, and said department has discontinued use of this form,

NOW, THEREFORE, BE IT RE-

SOLVED, that the director of the Department of Public Welfare be requested to return to the signer any and all provider agreements now in his possession.

#### **Resolution No. 15.**

(APPROVED)

SUBMITTED BY: Oklahoma County Medical Society

TITLE: Current Procedural Terminology, 2nd Edition

REFERRED TO: Reference Committee III.

WHEREAS, one of the important obligations of medicine is to:

1. Accurately and completely describe all of the medical services which we provide,

2. To compile them in a logical fashion with appropriate blank spaces for future services,

3. To take into account all the variables which are, or may become, important,

4. To assign code numbers to these services so that they may be understood and intelligently handled by non-medical people and by computers, and

WHEREAS, such a system has been devised by the American Medical Association, and has been published under the title "Current Procedural Terminology, 2nd Edition,"

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association adopt the "Current Procedural Terminology, 2nd Edition" of the American Medical Association.

BE IT FURTHER RESOLVED, that the use of this new system be optional with members of the Oklahoma State Medical Association.

BE IT FURTHER RESOLVED, that all members of the Oklahoma State Medical Association be encouraged to convert to this official system as rapidly as feasible in order to generate the understanding between all parties so necessary at this time.

#### **Resolution No. 16.**

(TABLED)

SUBMITTED BY: Edward L. Moore, M.D. and Jack L. Richardson, M.D.

TITLE: Endorsement of Indemnity Principle in Health Care Contracts.

REFERRED TO: Reference Committee No. III.

WHEREAS, the UCR program is being offered to the public by third

parties as a service contract with payment in full of physicians' fees, regardless of purchasers' income, and

WHEREAS, Third parties are agreeing to act as intermediaries between physician and patient to assure payment in full, and

WHEREAS, The Oklahoma State Medical Association has always endorsed the indemnity principle of payment of fees by third parties and opposed any type of service contract,

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association endorse only indemnity contracts as distinguished from service contracts, including those using the UCR principle, when dealing with third parties.

#### **Resolution No. 17.**

(APPROVED AS AMENDED)

SUBMITTED BY: Edward L. Moore, M.D., and Jack L. Richardson, M.D.

TITLE: Adoption of Policy Opposing Favoritism, Partiality or Preference of Third Parties.

REFERRED TO: Reference Committee No. III.

WHEREAS, special consideration has been shown third parties as exemplified by medical membership on their boards, endorsement by organized medicine, and special committees at the county and state levels, and

WHEREAS, many new problems with these programs are arising,

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association adopt the policy that all third parties be shown equal favoritism, partiality or preference by organized medicine and its members wherein the patient's welfare may be benefited.

#### **Resolution No. 18.**

(APPROVED AS AMENDED)

SUBMITTED BY: M. Joe Crosthwait, M.D.

TITLE: Council of Medical Staffs

REFERRED TO: Reference Committee No. II

WHEREAS, the Council of Medical Staffs has been proven to be a worthwhile and effective organization in the State of Louisiana; and

WHEREAS, this organization has been effective in resisting third party encroachment on private practice in the State of Louisiana; and

WHEREAS, the Council of Medical Staffs has been effective in enforcing its purposes which are:



A. To establish and pursue common goals which will benefit patients and improve the practice of medicine.

B. To promote cooperation of the Medical Staffs of Private Hospitals.

C. To determine the consensus of the private physicians regarding matters directly affecting the private practice of medicine, and to take action in connection therewith.

D. To do any and all things advisable, desirable or necessary in order to implement the actions approved by the membership; and

WHEREAS, many hospitals in Oklahoma have approved this program and are in the process of its organization;

NOW, THEREFORE, BE IT RESOLVED, that the Oklahoma State Medical Association go on record as approving the concept of this organization, and refer it to the Board of Trustees of the Oklahoma State Medical Association for study and recommendation.

**Resolution No. 19.**

(APPROVED)

SUBMITTED BY: Robert J. Hogue, Jr., M.D.

TITLE: Medical Insurance Review

REFERRED TO: Reference Committee No. III

WHEREAS, the law, as passed by Congress, requires that usual, customary and reasonable fees be paid under both Titles XVIII and XIX; and

WHEREAS, the officers and executives of the Oklahoma State Medical Association as well as the Medical Insurance Review Committee have made repeated attempts to get cooperation from the Department of Pub-

lic Welfare regarding the peer review system, to no avail; and

WHEREAS, it is reported by many doctors across the State that they are getting multiple, small cuts in their fees by the Department of Public Welfare to the point approaching harassment; and

WHEREAS, there have been multiple reports of the Department of Public Welfare not abiding by the decision of the Medical Insurance Review Committee;

NOW, THEREFORE, BE IT RESOLVED, that the President of the Oklahoma State Medical Association and a committee appointed by him meet with the Governor and try to negotiate a workable agreement whereby the usual, customary and reasonable fee system as required by law for the Department of Public Welfare will be implemented and followed and the Department of Public Welfare will be required to cooperate with the peer review system and adhere to the decisions of the Medical Insurance Review Committee.

BE IT FURTHER RESOLVED, that the Oklahoma State Medical Association send to all members a letter encouraging them to refer to the Medical Insurance Review Committee all claims where their fees are reduced by any UCR carrier below what is their usual, reasonable and customary fee, no matter how small the reduction. Also, all doctors shall be requested in this letter to report to the Medical Insurance Review Committee any instances where various carriers of UCR coverage report that they have the individual profiled for fees different than what other UCR carriers report they have him profiled.

BE IT FURTHER RESOLVED,

that the Oklahoma State Medical Association set up a system whereby they can follow through and see if the parties involved in individual negotiations before the Medical Insurance Review Committee do ascribe to the decision of the committee and this information shall be available to the committee and be included as a part of its annual report to the House of Delegates.

**Resolution No. 20**

(APPROVED AS AMENDED)

SUBMITTED BY: Richard W. Loy, M.D.

TITLE: Student Unrest

REFERRED TO: House of Delegates

WHEREAS, Student unrest and tension exist on university and college campuses across America; and

WHEREAS, student violence, vandalism and demonstrations have disrupted the educational processes; and

WHEREAS, these actions are perpetrated by a small but highly vocal minority to deny the rights of the student majority; and

WHEREAS, it is necessary to keep order on our college campuses to preserve the right of free discussion, debate and dissent.

NOW, THEREFORE, BE IT RESOLVED, that we, the members of the Oklahoma State Medical Association express our appreciation and approval of the actions taken by the Governor of Oklahoma, the Board of Regents, and our own Medical School Dean, to minimize disruption at the institutions of higher learning in Oklahoma; and

BE IT FURTHER RESOLVED, that copies of this resolution be forwarded to the aforementioned individuals and to members of the Oklahoma Congressional delegation. □



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OKLAHOMA STATE MEDICAL ASSOCIATION



## In Anticipation

VISIT YOUR automobile dealer soon and take a look at the new 1971 models. They are bound to be longer, heavier, more powerful and more expensive. Possibly, but not certainly, they will be a little less dangerous to drivers, passengers and pedestrians. Less probably, they will not be quite as capable of befouling our atmosphere. One feature of the new models least likely to change is the consistently shoddy assembly which is typical of every American made automobile, regardless of make, model or price. If you buy one of the new models, consider yourself fortunate if you find fewer than a dozen defects, ranging from unattached trim strips to unconnected hydraulic-brake lines. The costs of such poor workmanship in terms of time, money and lives is incalculable.

Workmanship in every automobile plant in this nation is under the direct control of a large and powerful union which has accomplished many good things for its members and, indirectly, for our people generally. This union has, apparently, cared little for economy, quality, safety and the public health.

The leadership of this union is now proposing to tell congress how to provide economical, high-quality medical care for the entire population.

Our Post Office Department is one of the oldest and most politically dominated branches of the federal government. Of all government operations, the Post Office Department more closely resembles, in structure and mission, a business enterprise than any other department in our bureaucracy. It func-

tions under the complete control of our elected and appointed officials. Its budget approaches eight billion dollars a year and it employs 742,000 people.

It takes longer for much mail to reach its destination today than it took one hundred years ago, and the Post Office Department has been bankrupt for generations.

It is now being proposed that this management system be applied to our nation's health care program.

Poorly fed, poorly clothed and poorly housed people are found in every section of our country, urban, suburban and rural. Statistics show clearly that the rich are getting richer and the poor are getting poorer . . . and more numerous. This, in spite of the increasing billions of dollars which are poured into welfare programs every year. Our welfare system is a hopeless, self-defeating, fruitless extravagance that is choking itself (and our economy) to death.

Welfare is the proper business of government. It is the special business of a department of government which also administers affairs concerning health and education.

It is being proposed that this nation's system of health care be administered by the same department that administers and regulates our welfare programs.

If all these pending proposals are approved by congress and supported by our citizens, we are destined to have a health care program which will be as effective and economical as our welfare program, as efficient and progressive as our Post Office Department, and will provide all the quality and dependability of a new car.

That's *something* to look forward to!  
MRJ ☐





The purpose of this letter is to report on some progress and a few projects involving your OSMA representatives.

You were well represented at the AMA House of Delegates meeting in Chicago. Notably, OSMA spokesmen were

among the leaders in effecting a serious reconsideration of the controversial report of the AMA's Committee on Planning and Development, a paper which would have materially changed the direction of medicine in many important areas.

We were disappointed in the AMA's stand to advocate a massive expansion of peer review for governmental programs, a plan which is being generally adopted by the Senate Finance Committee. Recently, OSMA representatives met with the Finance Committee's staff in an attempt to inject realism in a proposed plan which could dominate our professional time and perhaps destroy organizational medicine. The outlook is not good, and serious policy decisions will likely confront us soon.

Your delegates voted against the national dues increase . . . inflationary forces were recognized, but so were steps in economy to redirect available resources toward more important problem areas.

If you did not attend the recent OSMA-OBA Medical-Legal Conference at Fountainhead, you missed a most worthwhile educational program. All of us are busy, but not too busy to profit from improving our knowledge of the law and our relationships with attorneys.

Plans are underway to attack the short-

age of physicians in certain areas by creating a loan mechanism which will forgive the repayment of medical student loans for those willing to sign contracts with a new OSMA foundation in which they agree to practice a minimum of two years in "have-not" areas.

Peer review, as we understand our current responsibility, is being carried out efficiently and fairly by our Medical Insurance Review Committee. It's a thankless job for those directly involved, and discharging our responsibility requires an understanding profession and improved dialogue with government agencies and local carriers.

The workload will expand as our organizational year advances . . . the loss of Doctor Dennis and the manner of selecting his successor are of prime importance to all practicing physicians (we have been in continuing contact with the OU Board of Regents in this respect) . . . cohesiveness and unity within the profession become all the more important in the face of rapidly changing circumstances affecting the profession . . . control of drug abuse and our role in the question of liberalized abortion laws will occupy much attention during the year.

These are but a few examples of the diversity of interest of the OSMA and the complexity of problems challenging us.

We are a small association and not likely to attain greater financial wherewithal in the near future. I am pleased and proud to report that we are blessed with a growing number of physicians who will devote their precious free time on projects of common interest.

More volunteers would be appreciated . . . more unity is a necessity . . . and more guidance to your leadership is solicited.

Sincerely and fraternally,

*E. L. Carlson M.D.*



# Parathyroid Cysts: A Review and Report of Two Additional Cases

## CASE REPORTS

FRANK G. GATCHELL, M.D., F.A.C.S.

*Two cases of macrocyst of the parathyroid gland are presented. These are thought to be the 63rd and 64th cases reported. The clinical and gross surgical findings are discussed and the various histologic manifestations presented. The three major theories of origin of parathyroid macrocysts are discussed.*

## INTRODUCTION

IN 1905 GORIS<sup>1</sup> described the first large solitary cyst of a parathyroid gland. In an excellent review of the subject in 1967, Haid, *et al.*,<sup>2</sup> reviewed all reported cases to that date. They found 56 cases in the world literature and added two cases. Latimer, *et al.*,<sup>3</sup> in 1968 recorded the 59th case. Rogers, *et al.*,<sup>4</sup> in 1969 reported three more cases, one of which was associated with clinical hyperparathyroidism. As far as we are aware, the patients herein reported represent the 63rd and 64th cases reported.

From the Department of Surgery, Oklahoma City Clinic, 301 Northwest Twelfth Street, Oklahoma City, Oklahoma.

The first patient was a 43-year-old white male seen by the medical consultant on October 16, 1964 because of a mass which the patient had discovered in the right side of his neck two months prior to the examination date. There had been no tenderness over the mass and the patient symptomatically was euthyroid. There was no history of dysphagia.

The only significant item in the past history was a duodenal ulcer six years prior to this examination. It had been successfully managed with diet and antacids.

On review of symptoms, it was noted that the patient had had some slight urinary frequency for six to eight weeks prior to the initial examination. There was no history of renal stone.

Physical examination revealed a three centimeter slightly firm mass at the inferior portion of the right lobe of the thyroid gland. The left side was normal to palpation. There were no nodes palpated in either side of the neck.

Laboratory studies revealed a normal hemogram. The examination of the urine was negative. The sedimentation rate was 12 mm. per hour. Protein bound iodine was



5.5 mcg. percent. The 24-hour I-131 uptake was 18 percent and there was slight decrease in uptake over the right inferior portion of the thyroid gland. The survey was otherwise uniform. Serum calcium and phosphorus values were normal at 10.7 mg. percent and 3.5 mg. percent respectively. An upper gastrointestinal series showed some deformity of the duodenal bulb, but no crater was visualized.

The patient was admitted to the hospital on October 21, 1964, for exploration of the thyroid. The left lobe of the thyroid was found to be normal. Intimately attached to the lower portion of the right lobe was a thin-walled cyst, 3.5 cm. in diameter. It was filled with clear fluid and loosely attached to the right recurrent laryngeal nerve. The right superior parathyroid was identified, but the right inferior gland could not be demonstrated. A right subtotal thyroid lobectomy was carried out, removing the cyst intact. Microscopic examination of the thyroid tissue was unremarkable. (Figure 1)

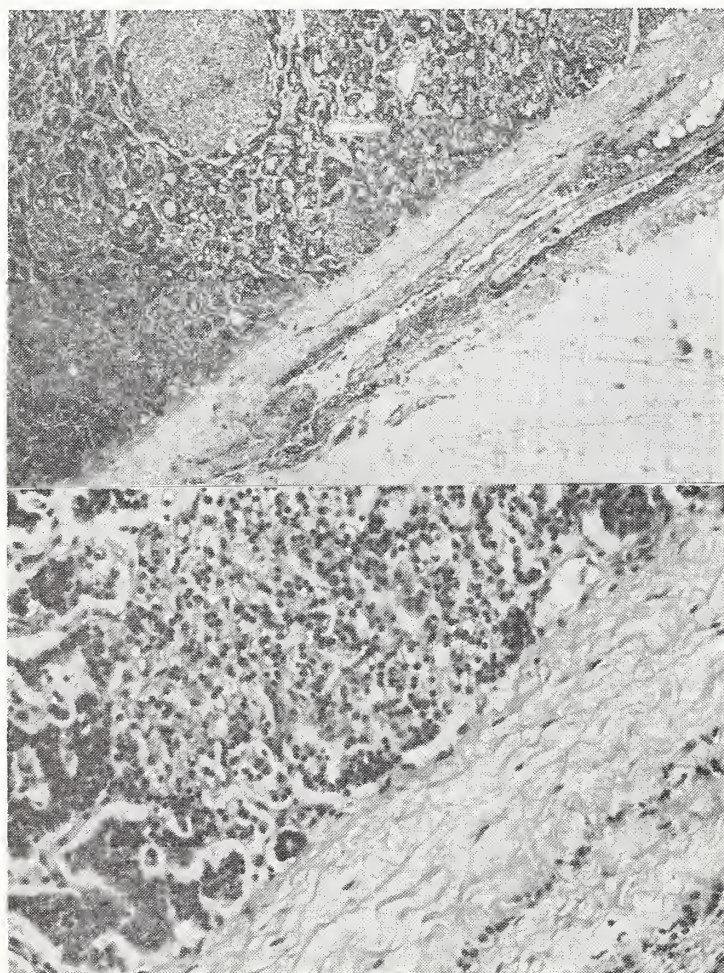


Figure 1. Case 1. Microscopic sections showing cyst wall and adjacent normal parathyroid tissue. (Hematoxylin and eosin stain; A x 100; B x 400.)

The wall of the cyst was composed of dense, collagenous, fibrous tissue which was practically acellular. Adjacent to the cyst could be seen several lobules of histologically normal parathyroid gland. This was noted on three sides of the cystic structure.

The patient had a satisfactory postoperative course. Pre- and postoperative vocal cord examinations were normal. He has been followed periodically since the operation, the last visit being in November, 1968. At that time, the neck incision was completely healed and there was no evidence of recurrent nodularity in the thyroid area.

The second patient was a 38-year-old white female who was seen by her medical consultant on April 7, 1969 for a general examination. She had no complaints. The only positive physical finding was a 1.5 cm. firm nodule palpable in the area of the inferior pole of the left lobe of the thyroid gland. The patient had been unaware that this was present. There was nothing of significance in the past history. The general physical findings were normal. Protein bound iodine was nine mcg. percent, T-3 was 29 percent. The I-131 uptake was 13.7 percent and the scan showed a suggestion of decreased uptake in the left lower pole area of the thyroid.

One month later the nodule was found still to be present and unchanged in size. The patient was taken to the operating room on June 3, 1969 and exploration revealed a 1.5 cm. thin-walled cyst filled with clear fluid located in the region of the left lower pole of the thyroid gland. Grossly, it was thought to be compatible with a parathyroid cyst. The other three parathyroids were identified and all appeared normal. The cyst and lower

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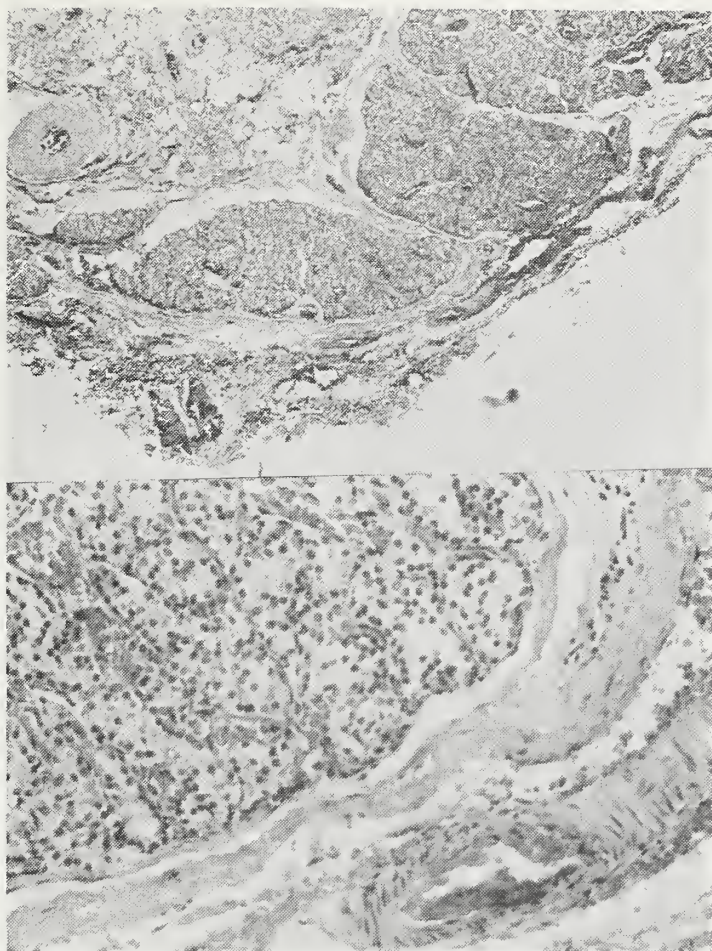


Figure II. Case 2. Microscopic sections showing cyst wall and adjacent normal parathyroid tissue. (Hematoxylin and eosin stain; A x 60; B x 150.)

half of the thyroid lobe were removed intact. Microscopic examination revealed an almost acellular cyst wall with islands of normal parathyroid tissue external to the cyst wall. (Figure 2) The postoperative course was uncomplicated. Pre- and postoperative vocal cord examinations were normal.

#### DISCUSSION

Most patients with this problem present with an asymptomatic mass in the neck. A few have been discovered incidentally at the time of routine physical examination. Others have complained of various pressure symptoms, mainly dysphagia. The initial impression is usually a cystic mass of the thyroid and most patients are clinically and chemically euthyroid. A few of the cases reported in the literature have exhibited signs of hyperparathyroidism.<sup>4</sup> Since the cyst is filled with clear fluid, it would, of course, fail to concentrate radioactive iodine and would appear "cold" on a thyroid scan. Crile performed needle aspiration in one instance and made a preoperative diagnosis based on

the fact that clear fluid was obtained. Interestingly enough, 85 to 90 percent of the cases reported have occurred in the lower pole area of the thyroid. Six have been reported in a substernal location and six have been associated with proven or strongly suspected hyperparathyroidism. Forty-seven of the sixty-two cases reported in the literature have occurred in females. At the time of operation, the cysts are usually found posterior and inferior to the lower pole of the thyroid gland and can usually be separated by blunt dissection. Occasionally, comment has been made that filmy adhesions were present, but in no instances were dense adhesions present. In a case reported by Rosenbaum, *et al.*,<sup>5</sup> an unusual finding was that the cyst occurred within the substance of the thyroid lobe.

#### MICROSCOPIC FINDINGS

Most authors agree that a parathyroid cyst is a simple cyst filled with clear fluid. Many describe a low cuboidal type epithelial lining with a wall composed of dense, almost acellular fibrous tissue. In some instances, as in our cases, normal appearing parathyroid tissue can be seen just external to the cyst wall. In other instances, a definite rim of parathyroid tissue is seen within the cyst cavity, indicating perhaps cystic degeneration of an adenoma. A number of cysts have been described in which there was no demonstrable lining epithelium within the wall. Some have been described as containing a homogenous material resembling colloid, but differing from thyroid colloid in that it has no iodine content.

#### THEORIES OF ORIGIN

Different explanations for the development of these unusual cysts have been offered. They include coalescence of multiple, smaller microcysts, cystic degeneration in a parathyroid adenoma, and several have mentioned the possibility of embryologic remnants from the third, fourth and possibly fifth branchial pouches. It seems reasonable to assume that any one or all of these mechanisms could produce such a cyst. It is well known that many embryologic abnormalities occur in the neck. During the course of thy-



roid surgery, thymic remnants are commonly encountered in the area of the lower pole. In addition, there are vestigial pharyngeal pouch remnants called Kursteiner's canals described by Gilmore.<sup>6</sup> Those cysts which exhibit a cuboidal epithelial lining could come either from parathyroid gland or Kursteiner's canals. It would be unlikely for thymic tissue to produce this type of epithelial lining. It is to be noted that the parathyroid glands arise from buds of cells in the region of the third and fourth branchial pouches. Simultaneously, in the very early embryo the thymic remnant and ultimo branchial bodies are detached. These latter have been termed the fifth pharyngeal pouch. It is thought that this structure loses its cavity and degenerates or is incorporated into the thyroid gland. Failure to do so may provide another source for the later appearance of a cyst in the region of the inferior parathyroid glands.

#### COMMENT

From the discussion of the possible origins of these cysts, it would seem reasonable that one or all of these mechanisms could be operative in a given instance. The various case reports would indicate that degeneration in an adenoma can occur, as well as confluence of numerous microcysts to form a larger cyst. Microcysts of the parathyroid gland have been very commonly noted.<sup>7</sup> This is in great contrast to the rarity of large parathyroid cysts. It is interesting to speculate why, if microcysts are so commonly seen, that more of them do not become confluent and produce clinically significant macrocysts. To add to the credence of an

embryologic origin, the fact is again noted that in a majority of cases the cyst is found near the inferior pole of the thyroid gland where embryologic abnormalities and aberrations most commonly occur.

#### SUMMARY

The cases of a 43-year-old white male and a 38-year-old white female with a macrocyst of the right and left inferior parathyroid gland respectively are presented. These are thought to be the 63rd and 64th cases reported. The patients were asymptomatic except for the mass in the neck. Following removal they have been completely well.

In the cases thus far reported, such cysts have occurred preponderantly in females. Approximately ninety percent have been located in the region of the inferior parathyroid glands. About fifteen percent of the cases reported have been associated with proven or suspected hyperparathyroidism. A presentation of the somewhat variable microscopic findings has been made. In addition, various theories of origin have been discussed. □

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301 N.W. 12th Street, Oklahoma City, Oklahoma 73103

#### 40th Annual Fall Conference

## THE OKLAHOMA CITY CLINICAL SOCIETY

October 26th, 27th, 28th, 1970

Hotel Oklahoma

Oklahoma City

Detailed information on this three-day conference will be outlined in the September issue of *The Journal*. Meanwhile, mark these dates and plan to attend.



# Long-Term Hyperalimentation in Ulcerative Colitis

AMNON GIMPEL, M.S. IV  
JOHN A. SCHILLING, M.D.

*Intravenous administration of glucose and nitrogen (hyperalimentation) is an effective means of extending a patient's endogenous nutritional reserves in catabolic states, thereby saving life and allowing for recovery. Technique and iatrogenic complications of this form of therapy are emphasized.*

**H**YPERALIMENTATION has proven to be an effective method of nourishing a patient and sustaining metabolic needs. In this case report, the principle of hyperalimentation was used in the therapy of a patient with ulcerative colitis, toxic megacolon, and septic complications.

## INTRODUCTION

Until recently, insufficient caloric intake over a long period contributed significantly to the mortality of patients suffering from the sepsis and repeated trauma associated with ulcerative colitis. Dudrick and Wilmore<sup>1</sup> demonstrated for the first time that growth, development, and positive nitrogen balance can be achieved by long-term paren-

teral nutrition, and this has been confirmed by Stephens and Randall<sup>2</sup> in patients with loss of small bowel, sepsis, pancreatitis, and surgical complications. In our case report, an intravenous solution containing hypertonic glucose, amino acids, electrolytes, and vitamins was used for 70 days in a 30-year-old female suffering from ulcerative colitis when oral intake was found to be ineffective. In this patient the relation of total plasma protein, nitrogen intake, total body weight, and total caloric intake during treatment is demonstrated.

## CASE REPORT

A 30-year-old Caucasian female was admitted to University Hospital in November of 1969 complaining of diarrhea of three months duration. The patient had been in good health until 1960 when, late in her second pregnancy, she experienced severe diarrhea of three weeks duration. Since that time, such episodes of diarrhea have occurred once or twice a year, lasting one to three weeks.

Two months prior to admission, the patient started to experience difficulty in breathing associated with abdominal distension. This was immediately followed by dark green, diarrheic stools containing blood and mucous. Often the patient was unable to control her bowel movements. Three weeks prior to admission, the patient experienced severe abdominal distension accompanied by a 39° C. temperature. She was hospitalized

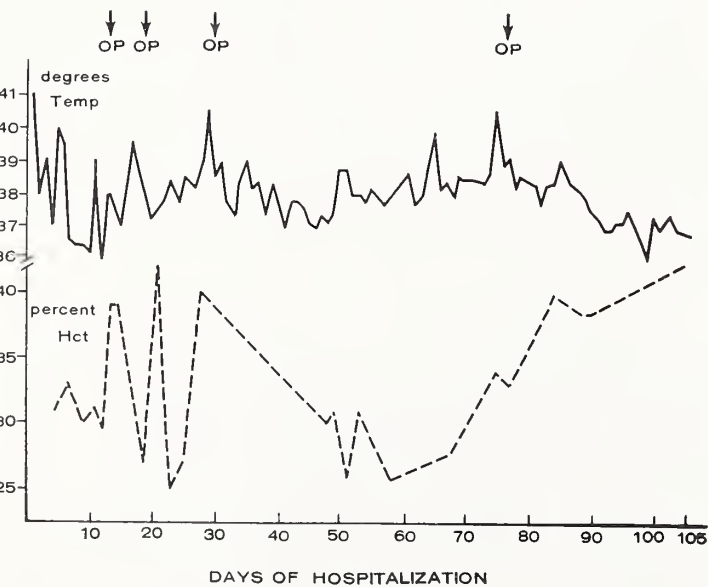
From the Department of Surgery of the University of Oklahoma Medical Center, Oklahoma City, Oklahoma.



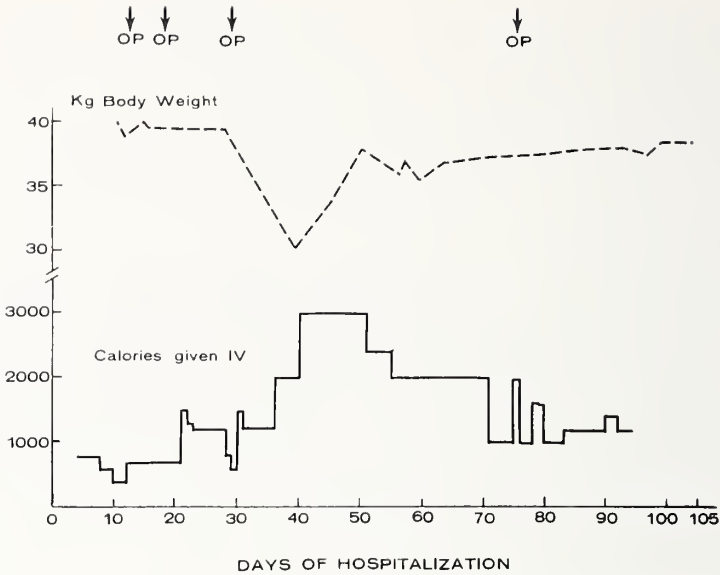
at another hospital for evaluation where a diagnosis of ulcerative colitis was made. Two days prior to her admission her diarrhea returned. On admission it was learned that the patient had lost 15 pounds in the last two months. Her social history revealed a very unstable life.

On physical examination, the patient appeared thin, pale, and chronically ill. B.P. 110/90. P. 120. Temp. 39° C. Weight 40.5 Kg. The abdomen was, in general, very tender with hyperactive bowel sounds. No masses or organomegaly were detected. A few one cm. inguinal nodes were present bilaterally. No masses were felt in the rectum.

Hospital Course: The first few days were marked by recurrent high temperature spikes of 38° to 40.5° C. and the hematocrit fell from 33% to 27%. (See graph 1.) The patient was placed on a steroid regimen of 100 mg. hydrocortisone three times daily. Two units of whole blood were given. Her condition continued to deteriorate. On the sixth day the laboratory studies showed: Hct. 28%, Cl. 93 meq/L, Na 133 meq/L, K 2.8 meq/L. Total protein 5 Gm.%. Albumin 2.12 Gm.%. Globulin 2.9 Gm.% (see graph 3.) Stool cultures and sensitivity studies were repeatedly negative for pathogens, ova and parasites. Since her condition did not improve, on the 13th day of her hospitalization the patient was surgically explored. The entire colon was



Graph 1. Temperature and hematocrit during hospitalization. Note marked variations preceding surgery (OP).



Graph 2. The relationship between total body weight and IV caloric intake.

found to be involved in the disease. The external surface of the large bowel appeared to be hemorrhagic and slightly friable. A total colectomy and ileostomy were performed. The rectal stump was closed. On the sixth postoperative day the patient complained of severe pain over the entire abdomen. She developed a spiking fever of 40° C., the hematocrit fell 27%, and the total protein to 4.6 GM.%. Chest x-ray revealed free air under the diaphragm with no active infiltrates identified within the chest. The abdominal x-ray revealed multiple areas of distended small bowel compatible with mechanical obstruction or ileus.

On the 19th day of her admission, the patient was again surgically explored. Operative findings consisted of generalized peritonitis from a perforated rectal stump. A rectal excision was done with perineal drainage. The patient continued to lose weight steadily. (Graph 2.)

Therefore, on the 23rd day of hospitalization, intravenous hyperalimentation was started. Fluids were provided through #14 subclavian 12 inch superior vena cava catheter. To maintain sterility at the site of catheterization, the cutaneous area was defatted daily with ether, was covered constantly with bacitracin ointment, and was protected with a sterile dressing. For seven days the patient improved. Then, abruptly, she developed a spiking temperature of 40.5° C. and severe abdominal pain. On the 30th day of her hospitalization, another exploratory laparotomy was done. Operative findings included generalized peritonitis



and a large pelvic abscess. Three drainage catheters were left to drain the abdomen and pelvic region. For the next ten days the patient lost about 10 Kg. which amounted to approximately 25% of her original body weight on admission. The hyperalimentation was first doubled, then tripled to 3,000 cc/24 hours (65% Hyprotigen and 35% D<sub>50</sub> W) for nine days. Soon the patient started to gain weight. The laboratory values of total protein, globulin, and albumin showed constant increases. (See graphs 2 and 3.)

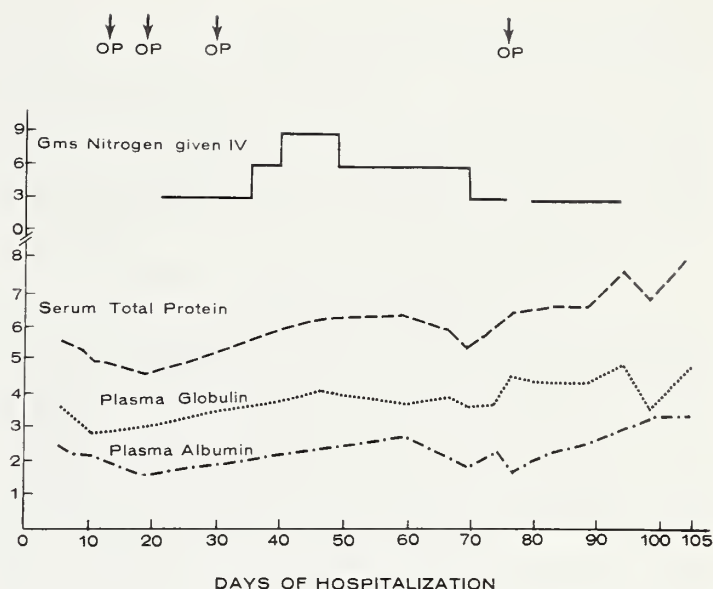
On the 76th day of hospitalization, the patient developed a fever of 41° C. and severe abdominal pain. A fourth exploratory laparotomy was performed on the 77th day. Operative findings revealed subhepatic abscesses which were drained. On the 80th day antibiotics, which had been given to the patient during most of her hospitalization, were discontinued. The patient's temperature fell gradually. At the same time an increase in the values of total protein, albumin, and globulin was seen.

Gradually she increased her oral intake (see graph 4), and on the 95th day of her hospitalization, intravenous hyperalimentation was discontinued. The patient was discharged from the hospital on the 105th day. At that time her weight was 38.5 Kg. and laboratory values for electrolytes, hematocrit and plasma protein were within normal limits. Two months later the patient was seen in the outpatient clinic. She had gained 3.5 Kg. and was doing very well.

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*A native of Jerusalem, Amnon Gimpel came to the United States in 1964 and is presently a fourth year medical student at the University of Oklahoma School of Medicine.*

*A 1941 graduate of Harvard Medical School, John A. Schilling, M.D., is presently Professor and Head of the Department of Surgery at the University of Oklahoma Medical Center. Doctor Schilling is certified by the American Board of Surgery; a Fellow of the American College of Surgeons; a member of the American Association of Cancer Research, the American Surgical Association, the American Association for the Surgery of Trauma and the American Physiological Society.*



Graph 3. Comparison of IV nitrogen intake and total plasma protein, plasma globulin and plasma albumin.

## DISCUSSION

The metabolic turnover of the patient was accelerated by the disease process, repeated trauma, high fever, and sepsis. As a result, hypoproteinemia developed rapidly and a severe loss of body weight, as much as one kilogram per day, ensued. Very early in the disease course, available body stores of glucose and glycogen were exhausted. Consequently, body protein and body fat were depleted to fulfill energy requirement. Severe loss in body weight of one kilogram per day is composed of approximately one-half lean body tissue and one-half fat. The 500 grams of fat contributed approximately 4,500 calories, and that of 500 grams of lean tissue (125 grams protein) contributed about 500 calories.<sup>3</sup> These heavy losses of body protein impaired wound healing and response to sepsis. In addition, reduced oncotic pressure ultimately led to a state of chronic hypovolemia.<sup>4</sup>

It is clear that debilitated patients with severe disease of the alimentary tract require vigorous nutritional support for restoration of body tissue and to compensate for increased metabolism. Superimposed on this need are the increased energy and nitrogen requirements resulting from the preoperative period of starvation, postsurgical catabolic response and increased catabolism resulting from postoperative complications.

In an attempt to keep a patient in metabolic balance, trials of intravenous fat, protein hydrolysates, and concentrated glucose



solution have been tried in the past but with only limited success. The difficulties were toxicity, sepsis, hemorrhagic diathesis, fever, and inadequate caloric intake.

Extensive animal studies performed during the 1950's demonstrated that a formulated elemental diet can support normal longevity, reproduction, and growth. Abbott and Alberton<sup>5</sup> showed in 1963 that an adequate intake of protein and calories, given intravenously, could abolish or minimize the loss of nitrogen in a series of volunteers and patients undergoing operations. Recently a method of total parenteral nutrition has been devised by Wilmore and Dudrick.<sup>6</sup> This method provides nutrients in amounts essential for weight gain and normal growth despite the complete absence of gastrointestinal function.

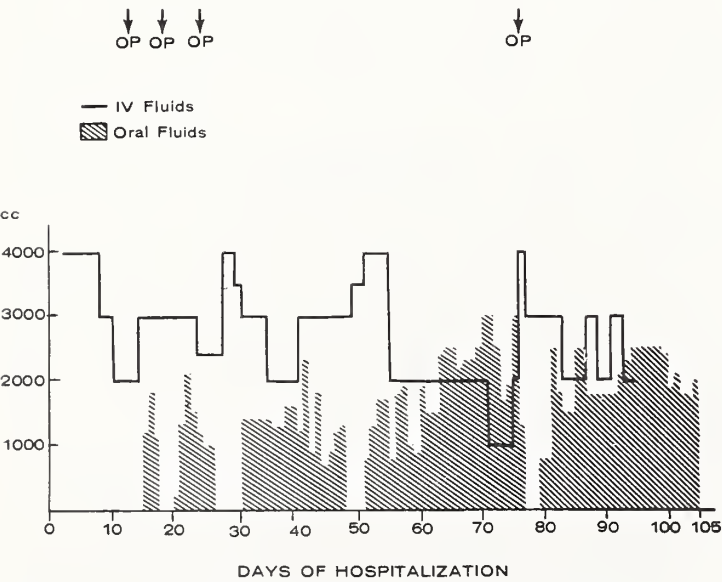
To improve the poor nutritional state of our patient, intravenous feeding was started. A central venous catheter was placed through the subclavian vein into the superior vena cava. This allowed the hypertonic infusate to be delivered at a slow, uniform rate to insure proper utilization of the glucose and amino acids. Placement of the catheter in the vena cava delivered the solution into a region of high blood flow for rapid dilution to avoid venous inflammation and thrombosis.<sup>7</sup> Initially, small amounts of hypertonic solution (1,000 cc/day) were administered (see graph 2) to prevent the initial symptoms of gastrointestinal intolerance

such as nausea, vomiting, and diarrhea. A few days later the amount of hypertonic solution was increased to 2,000 cc per day. The composition of one liter of hyperalimentation solution given to the patient was 20% glucose and 18.5 G. protein (equivalent to 3 G. nitrogen). This solution was made by mixing 650 cc Hyprotigen solution and 350 cc D<sub>50</sub>W. A liter of hyperalimentation solution supplied the patient with about 1,000 calories. Lawson<sup>8</sup> reported that unless sufficient non-protein calories are supplied, the parenteral amino acids would be utilized for energy and not protein synthesis. Therefore, special consideration was given to provide sufficient non-protein calories in each liter of hyperalimentation fluid. Optimal results were obtained with the ratio of one gram nitrogen per 200 non-protein calories.

Major parenteral feeding allowed us to achieve positive nitrogen balance as well as supply the patient with the calories needed for metabolism. There was a constant increase in total body protein, globulin and albumin as soon as nitrogen was supplied by hyperalimentation. (Graph 2.) The severe body weight loss of one Kg./day was stopped only by administration of 3,000 cc of the infusate solution for nine days which caused a gain of seven Kg. during that period. (Graph 3.)

There are several advantages in the use of intravenous hyperalimentation which deserve notice in addition to their major objective, namely, providing high caloric and high protein food supplements. The elemental diet is completely bulk free. Therefore, stool volume is reduced. The reduction in bulk and frequency of stools in ulcerative colitis is of extreme importance. Hyperalimentation fluid is also practically fat free in composition, thereby eliminating the need for most pancreatic and biliary secretion.

It is important to emphasize that this method of feeding is potentially dangerous to the patient. A glucose infusion rate of only 0.5 G per Kg. body weight per hour is the most that can be tolerated if glycosuria is to be prevented. In fact, in postoperative states the values are even lower due to a reduced utilization of glucose and lowered sensitivity to insulin. Hypertonic glucose is also extremely irritating to venous endothelium and may lead to thrombophlebitis.



Graph 4. Gradual replacement of IV fluid by oral fluid intake.



Therefore, a solution of less than 25% glucose should be used in hyperalimentation feeding.

SUMMARY

In this case report a patient who lost 25 percent of total body weight in ten days benefited from the aggressive use of intravenous hyperalimentation. The relationship of total body weight to caloric intake through intravenous feeding is shown. An appropriate amount of nitrogen intake in the form of amino acids increased the values of plasma proteins which significantly contributed to the recovery of the severely debilitated patient. In conclusion, intravenous hyperalimentation is an effective method of nutritional supplement during recovery from ulcerative colitis and should be used in difficult cases of gastrointestinal surgery. How-

ever, meticulous care must be taken to prevent sepsis. The rate of administration as well as the concentration of glucose and nitrogen must be carefully regulated to avoid iatrogenic complications of this therapy. □

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COMMUNITY HEALTH WEEK - 1970

All County Medical Societies will be asked to participate in the eighth annual observance of National Community Health Week. This special week gives medical organizations an opportunity to promote good health care and health careers. Jointly sponsored in Oklahoma by the OSMA and the AMA, Community Health Week—1970 will be observed October 18th-24th.

County Medical Societies will be invited to participate in the program through the use of local newspaper ads and radio and T.V. spot announcements.

All County Society Presidents and Public Relations Chairmen will coordinate local activities.



# Water-Borne Outbreak of Shigellosis at an Indian Bible School

RALPH C. GORDON, M.D.  
GEORGE J. POGAN, M.S. Hyg.

*Shigellosis is rarely transmitted by the water-borne route but in this epidemic it appeared to be the mode of infection.*

**THIS REPORT** relates the details of an epidemic of shigellosis that occurred at an Indian Bible School in southeastern Oklahoma in August, 1968, and describes a plan for prevention of future epidemics.

On August 1st, 1968 at 5:00 p.m. a six-year-old Indian boy was admitted to the U.S.P.H.S. Indian Hospital, Talihina, Oklahoma with a 24-hour history of abdominal pain, vomiting and fever. Approximately three hours following admission he developed generalized cyanosis, was unresponsive for several minutes and then began having severe convulsions which continued intermittently for 24 hours in spite of frequent administration of anticonvulsants. Three hours following admission of the first patient a 5½-year-old boy was hospitalized with a history of fever for six hours and a generalized seizure one hour prior to admis-

sion. The grandmother of the second patient stated that both children had attended a Bible school meeting in a small rural community for the previous three days.

During the next 13 days an additional four patients who had attended the meeting were admitted with a diagnosis of dysentery and all had positive stool cultures for *Shigella flexneri*. On August 2, 1968 the church meeting was visited by Latimer County and Indian Health public health officials who found that 37 people had attended the meeting and that there were an additional 23 family contacts. Stool cultures could be obtained on 36 of the 37 people who had attended the meeting and on 16 of 23 family contacts. Positive cultures were reported in 13/36 of the former group or a primary attack rate of approximately 36 percent and in 3/16 of the latter family contact group or a secondary attack rate of approximately 19 percent. Clinical manifestations of illness occurred in nine of the total of 16 individuals who had positive stool cultures. All infected persons were treated with ampicillin except for one girl who was given tetracycline because of known penicillin allergy. Investigation of the toilet facilities at the church revealed that they were non-existent with defecation occurring on the ground. Water for preparation of the refreshments was obtained from an uncovered well and it was felt that contamination from the surface

From the USPHS Indian Hospital, Talihina, Oklahoma 74571.



water had occurred. Bacteriologic study of the well water revealed the presence of *Shigella flexneri*. It was believed that the epidemic was water-borne because the only foods served were cookies and a drink prepared by mixing commercial soft drink powder with the well water. Chlorination of the well with sodium hypochlorite five percent was immediately performed and further use of the well was discontinued.

#### DISCUSSION

Bacillary dysentery (shigellosis) continues to be an important cause of summer gastroenteritis in certain areas of the United States. However, in recent years epidemics have but rarely occurred outside of institutions.<sup>1</sup> In a recent review of 330 cases it was noted that the disease is of most importance among the lower socioeconomic group and, in the average patient, is a clinical syndrome of uncomplicated febrile diarrhea.<sup>2</sup>

Our patients were treated with ampicillin by the oral or parenteral route as recommended by Haltalin<sup>3,4</sup> and all patients recovered satisfactorily. The one girl treated with oral tetracycline also did well.

#### *Preventive aspects:*

A program for the prevention of future outbreaks of this type at Indian meetings was developed by the U.S.P.H.S. sanitarian, health educator, county public health nurse,

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*George J. Pogan, M.S. Hyg., a graduate of the University of Pittsburgh, is specializing in Hospital Administration. At the time work was done on this paper, Mr. Pogan was Service Unit Director of the U.S.P.H.S. Indian Hospital in Talihina, Oklahoma. He is currently administrator of the Appalachian Regional Hospital at Hazard, Kentucky.*

*Since his graduation from the Vanderbilt University School of Medicine in 1964, Ralph C. Gordon, M.D., has been certified by the American Board of Pediatrics. He is now a Fellow in Pediatric Infectious Diseases at Baylor College of Medicine in Houston, Texas.*

hospital pediatrician, service unit director and various Indian leaders.

At the request of church officials the Indian Health Service works with church members in eliminating hazards concerned with such public meetings. Several weeks before a meeting, a sanitarian surveys the sanitation arrangements and corrects deficiencies or provides temporary facilities. The grounds are sprayed to control insects, a water wagon is provided to supply fresh water for drinking and handwashing and soap is supplied. Audiovisual aids are used to demonstrate to the cooks proper food handling practices and garbage disposal.

#### RESULTS

Reluctance to cooperate was demonstrated by some of the participants early in the program, but total support by the church and tribal leaders soon overcame this opposition. Under Public Law #121, the Sanitary Facilities Construction Act, funds were committed to provide a safe water supply and sanitary facilities at each Indian campground. Since the inception of this program four large camp meetings have been held in the Talihina Service Unit and no shigellosis has been reported.

#### SUMMARY

This paper reviews the circumstances of an epidemic of shigellosis at a summer Bible school meeting for Indian children in southeastern Oklahoma and presents a preventive and health education program that was developed following this outbreak.

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## Tumor Clinic Proceedings

Edited by  
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### CASE No. 30: Squamous Cell Carcinoma of the Uvula in a Patient with Multiple Previous Squamous Cell Carcinomas of the Respiratory Tract

**PRESENTATION:** The patient today is a 74-year-old white male with a very interesting history. In 1955, he had a squa-

mous cell carcinoma of the larynx for which he had a left radical neck dissection and laryngectomy. In 1963, he developed a left sided neck mass and was treated with radiation therapy to about 7,600 rads. Then in 1968, he was found to have a squamous cell carcinoma of the posterior pharynx which was treated with surgical excision. At the same time he was found to have a lesion of the right upper lobe of the lung which was felt to be a cancer and this was also treated with radiation therapy. Subsequently, after those treatments, he has done well. A bronchoscopy was done in November, 1969, which was negative.

On routine follow-up in the out-patient clinic in January, 1970, a lesion of the uvula was found and biopsied. The report was squamous cell carcinoma.

Physical examination at this time reveals an over-weight, well-developed white male. The patient is edentulous. He has a superficial erosion of the right side of the uvula with some surrounding erythema. He has a whitish plaque on the left side of the uvula. The nasopharynx is unremarkable and the hypopharynx reveals no lesions. There is a scar in the posterior pharynx from previous surgery. The remainder of the physical examination is essentially non-contributory to his present problem.

**DOCTOR CONDIT:** You said that in 1963, he had a leftsided neck mass treated

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

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with radiation therapy? What was that thought to be?

PRESENTER: It was biopsied with a needle and it was a squamous cell carcinoma.

DOCTOR PARKER: Was it from the primary in the larynx?

PRESENTER: Yes. It was felt to be a metastasis from the carcinoma of the larynx treated in 1955.

DOCTOR PARKER: Eight years ago?

PRESENTER: It was seven-and-a-half years later that he developed the mass in the area of the old neck dissection.

DOCTOR JOEL: What was the extent of the original lesion?

PRESENTER: I don't have the record of the original surgery, and I have no way of knowing. About a year later, in 1968, we found the squamous cell carcinoma of the posterior pharynx.

DOCTOR BOGARDUS: It was January and February, 1968, that he had a rapid split course of radiation therapy to the lung for either another primary or a metastatic lesion, and he has done well in regard to that lesion also.

DOCTOR MORAN: How much radiation did he get then?

DOCTOR BOGARDUS: 4,000 rads.

DOCTOR CONDIT: Any other questions about the history? Doctor Moran, what about surgical management of the uvula at this time?

DOCTOR MORAN: This is a very small, superficial lesion as evidenced by examination. The mirror examination of the posterior hard and soft palate does not reveal any ulcerations there. To adequately remove this lesion it is going to necessitate taking a great deal of the soft palate, going upward and back and almost to the hard palate. For practical purposes you would remove all of his soft palate. This is very deforming because of the ensuing difficulty with swallowing. I am sure this would further deteriorate what voice he does have.

DOCTOR CONDIT: What about a prosthesis?

DOCTOR MORAN: This is what we usually use but it is not well accepted, as a general rule.

DOCTOR CONDIT: Since he has already had a laryngectomy, he might accept it bet-

ter than most people. He wouldn't have to worry about breathing.

DOCTOR MORAN: The prosthesis does have to fit right up against the posterior pharyngeal wall to be effective. This is difficult to work out well if it is a mechanical prosthesis. Because of these problems we are giving consideration right now to the use of cryosurgery in this type of lesion. This particular lesion is a very superficial one which you can watch closely, and we have had some success in using this technique on this type of lesion.

DOCTOR CONDIT: Doctor Bogardus, how about other alternatives?

DOCTOR BOGARDUS: I looked over his previous treatment record. It would be possible to treat him. Our biggest problem here is that he does have considerable radiation changes across the soft palate and pharyngeal wall on the left side. This is due to the previous external radiation given to the cervical node. He must have received about 4,000 or 5,000 rads to this area of the palate. This would limit what we could do. It has been a long time back and we would completely ignore the previous treatment if we went for a cure. I don't know whether he would tolerate it because of the dose tolerance of these structures, but perhaps with the time lapse that has occurred, we could retreat him. I would prefer to see cryosurgery tried, and if it failed, then come back and retreat the entire area with radiation. I would rather do this than to subject him to the radical surgery that would be necessary.

DOCTOR CONDIT: Of course, the other alternative is some kind of chemotherapy, usually Methotrexate, but the most this can offer is only palliation.

DOCTOR BOGARDUS: I would certainly leave that until every other method of treatment has been exhausted.

DOCTOR CONDIT: Doctor Parker, any other comments?

DOCTOR PARKER: I'd like to ask two questions. Is this the only sign of recurrence in the uvula?

DOCTOR MORAN: Yes.

DOCTOR PARKER: Have you used cryosurgery before? I know nothing about it. Does it cause necrosis of the carcinoma and leave the normal tissue intact?



DOCTOR MORAN: Ideally, I'd like for it to, but no. What you do is freeze an area and that is why the uvula is so nice, because of its position. We place thermocouples around the tumor at a distance that we would get from a surgical procedure and freeze this area down to minus 14 to minus 20 degrees, hold it there for approximately 15 minutes, thaw it as rapidly as we can, freeze it again, and repeat this process three times. You kill the cells by freezing them and quickly warming them. You get intracellular ice formed, then with the quick warming you get disruption of the cells. It has been pretty well proven that intracellular ice alone does not kill the cells, but it is the rapid change in temperature that does it. As a result, what you get is a loss of the uvula and a portion of the soft palate; probably much less than what we would surgically, but we try to freeze approximately the same area we would take surgically. Usually the more viable areas don't slough out.

DOCTOR PARKER: Where do you put the thermocouples; right next to the uvula?

DOCTOR MORAN: No. You put them at a distance approximately a centimeter away. In other words, the distance that you would like to have around the lesion and see if you can get the temperature down to minus 14 to minus 20 degrees. Obviously, where your probe is, it is much lower than that. If you can get the temperature change that far from the primary it will probably be low enough to be effective.

DOCTOR CONDIT: Do you have liquid nitrogen in your probe? Is that the way it works?

DOCTOR MORAN: Yes. Liquid nitrogen is in the probe. It can get down to a minus 220 degrees. The lowest temperature depends on the mass that you attempt to freeze. This is why sometimes the repetition is more effective than the single treatment. Lymphoid tissue, such as tonsils, you can freeze one time for a tonsilectomy. The

lymphoid tissue itself is more susceptible and will slough out.

DOCTOR PARKER: Then you expect the uvula to slough out?

DOCTOR MORAN: Yes.

DOCTOR CONDIT: This repetitive freezing and thawing is one of the standard techniques used in the laboratory to disrupt cells. Any other observations about the management of this patient?

DOCTOR MORAN: I think this is an interesting problem. This is a man who started having lesions in 1955. He then went seven years and developed a node in the neck. It is not clear if this was a metastatic lesion or residual tumor, but it was a long time getting there if it was either one. He then had a primary lesion in the posterior pharynx, the lung, and now the uvula. We used to think if you saw two primary lesions it was unusual, but he appears to have had four different primary lesions.

DOCTOR CONDIT: This also points out that biologically, he has had tumors that are not terribly aggressive, so you can make a case for proceeding step by step, particularly at his age.

DOCTOR PARKER: Was he a heavy smoker?

PRESENTER: Yes, he was.

DOCTOR MORAN: I think this points out too that smoking probably affects the whole tracheo-bronchial tree. If you've had a lesion in one region it doesn't mean that you are safe from developing others, even if the original primary was cured.

*FINAL DIAGNOSIS*: Squamous cell carcinoma of the uvula in a patient with three previous primaries of the respiratory tract.

*TUMOR CLINIC RECOMMENDATION*: It was recommended that the lesion be treated with cryosurgery because of the extensive defects that would be related to surgical excision. If the lesion recurs it can probably be treated with radiation therapy because of the long period between his previous radiation therapy to the neck and the occurrence of the lesion on the uvula. □



## Parallelisms of Medical Greatness

MARTIN M. CUMMINGS, M.D.

*The life and accomplishments of a distinguished Oklahoma physician, Stewart Wolf, M.D., are compared with that of S. Weir Mitchell, the father of American neurology. The parallelisms of their medical and cultural interests are identified and discussed.*

NO PERCEPTIVE PERSON could return to this medical center after an absence of a decade without reflecting on the profound changes which have occurred here—and particularly those changes which are attributable to the person most responsible for them. The dreams and aspirations of Doctor Stewart Wolf were so persuasive that, like many others, I succumbed in 1960 to observe and follow this remarkable Pied Piper (Figure 1). His clinical prowess, investigative talent, and personal charm were characteristics cultivated in the environment of Baltimore, Boston, and New York. However, his diversity and versatility of interests and accomplishments came into full display in this setting where I am now privileged to compare my views of Stewart Wolf with another cultured and creative physician, S.

Weir Mitchell, the father of American neurology (Figure 2).

Stewart Wolf was born in Baltimore in January 1914 a few days after Weir Mitchell's death. They were raised and educated only a few miles apart on the Eastern seaboard. Both Mitchell and Wolf served in the great wars of their times and both returned to troubled societies, determined to improve the lot of their fellow men by full-time devotion to teaching, research and the practice of medicine. Both gave much of their medical careers to the health affairs of veterans (Figure 3). Both were members of the Association of American Physicians, American College of Physicians, the American Clinical and Climatological Association, and other prestigious medical organizations. Stewart's alma mater, Johns Hopkins University, awarded Weir Mitchell an honorary LL. D. in 1912. Both shared a love for literature, libraries, and the fine arts. Mitchell was a noted poet as well as a physician. I have always suspected that if we were free to examine the Wolf's attic we would find there lyrics written to his beloved ones, or poems which extol the virtues of persons or causes which captured his attention. Stewart Wolf was a choral and choir singer and served as President of the Oklahoma Symphony for five years.

Weir means "fishing place" or "enclosure for taking fish." True to his name Weir Mitchell was an avid fisherman and if for no other reason, this attracts me to him (Figure 4). Unfortunately I can find no



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parallel interest on the part of Stewart Wolf, although we might expect him to become similarly involved in his new position at the Marine Biomedical Institute at Galveston.

The remarkable parallelism of their medical interests is the main focus of my remarks today. A man's character and contributions can often best be seen from his bibliography and his portrait. This is reflected in Mitchell's bibliography which I would like to review with you briefly.

Like Weir Mitchell, Wolf's earliest medical research interest was in the field of gastrointestinal physiology. Mitchell followed with studies of neurophysiology, the effects of drugs and toxins on animals and man, and finally clinical studies of the central and peripheral nervous systems. There were excursions into psychosomatic medicine with

interests in headache, sleep, hysteria, and finally the full integration of neurology as an important specialty of clinical medicine, including neurocirculatory relationships.

Stewart Wolf's parallel contributions to medicine are of such currency that they need no recounting here. They are taught to contemporary students as distilled from some 246 publications, including 11 books and monographs. The similarity of sequence of interests between Mitchell and Wolf I believe to be truly remarkable. A cynical observer might even be tempted to suggest that the younger deliberately emulated the older. Even if this were true, which I do not believe, it is still more remarkable that he succeeded so well. It is more likely that Stewart's interests were influenced most by his mentor and friend, Doctor Harold Wolff. How many of us fail to reach the level of attainments of our heroes in medicine, be

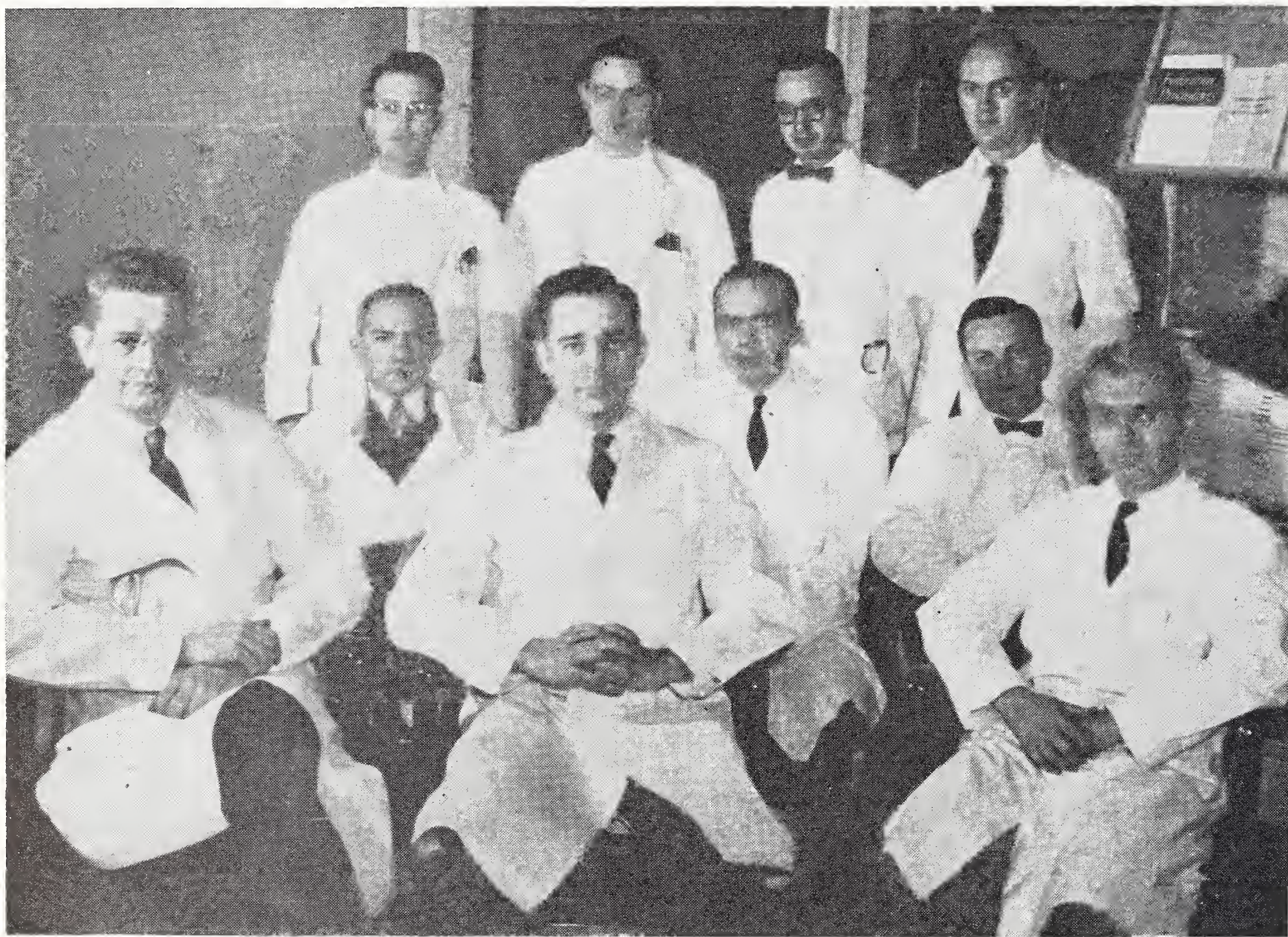


Figure 1. Full-time members of the Medical Department, University of Oklahoma School of Medicine, 1952-1953. First row: Professor R. H. Bayley; Doctor S. G. Wolf, Professor and Head of the Department; Doctor R. M. Bird. Second row: Doctor R. C. Lowe; Doctor R. A. Schneider; Doctor J. P. Colmore. Third row: Doctor B. L. Bailey; Doctor C. G. Weiman, Chief Resident, Doctor C. Liebrand; Doctor R. M. Gastineau. (Doctor W. W. Schottstaedt and Doctor J. F. Hammarsten joined the Department in September 1953, and are not in this photograph.)



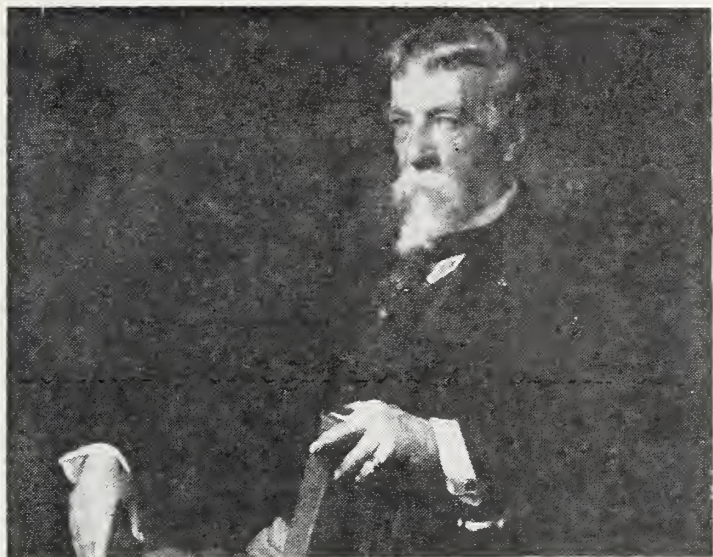


Figure 2. Doctor S. Weir Mitchell.

they Osler in internal medicine, Cushing in surgery, or Jacobi in pediatrics.

In addition to these medical parallelisms there remains the striking social and cultural parallelism of complete men. Particularly, I am in a position to relate that segment of history which reveals Mitchell's influence on my predecessor, Doctor John Shaw Billings, who founded the National Library of Medicine. I shall comment also on Stewart Wolf's influence on the same institution and its present director a full century later.

Weir Mitchell came to know and respect Billings during the Civil War when Mitchell's brother came under his care for a mortal gunshot wound. Billings, who had performed more than 500 amputations during the battles of Chancellorsville, Gettysburg, and the Wilderness Campaign, although unable to save young Mitchell, demonstrated his tender care for the sick and disabled and thus captured the esteem and friendship of Doctor Mitchell.

He became a strong supporter of the Sur-

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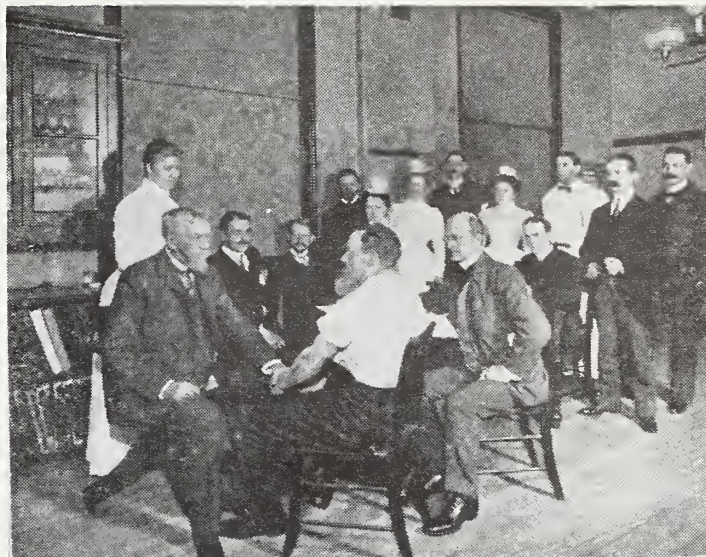


Figure 3. Doctor Mitchell examining a Civil War veteran.

geon General's Library and along with William Osler, Oliver Wendell Holmes, and William H. Welch, became intimate friends of the young surgeon, Billings, who was to develop the *Index Catalog* and the *Index Medicus*, said to be America's greatest contribution to medicine in the 19th century. Billings and Mitchell are described driving around Washington together "in a queer ramshackle buggy with an indifferent-looking nag, Billings holding the reins and applying the whip," while Mitchell is remembered for his courtly manner and appearance waving his tall hat to acknowledge someone en route. Many in this room will be reminded, I'm certain, of the Homburg which Stewart Wolf uses with gestures of equal nobility while driving or being driven around this community and elsewhere (Figure 5). He was recently observed at a meeting in Germany using his hat as an umbrella in a rainstorm.

Billings and Mitchell met often during meetings of the National Academy or of the Carnegie Institution of which Billings was a founder. In addition to their work for these organizations they also exchanged their most personal views of leading figures of their times as well as their common interests in cultural and other affairs. I was pleased to find a letter from Mitchell to Billings importuning him to use his influence to get the "fish commission" to transfer black bass to a pond where I'm certain Mitchell intended to fish. He also wrote to Billings in 1890 to gain access to a veteran patient he wished to study, a practice which



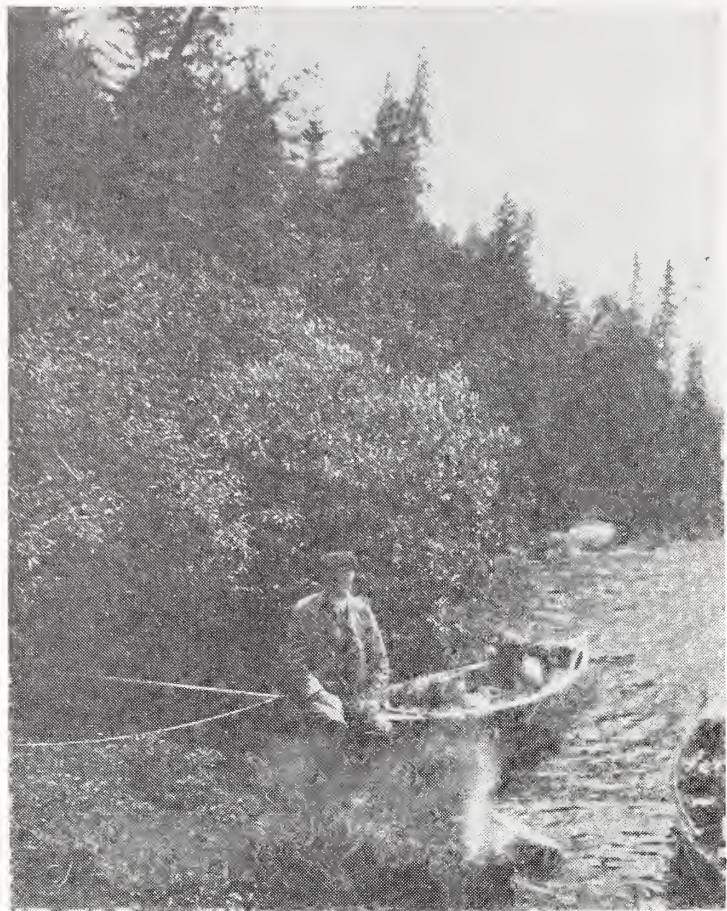


Figure 4. Doctor Mitchell fishing on the Restigouche River in Canada.

I'm certain that Wolf and others here still engage in.

In 1890 Mitchell convinced Billings that he should leave government service after 30 years and give greater scope to his interests by becoming the first Professor of Hygiene at the University of Pennsylvania. Billings accepted this position serving the first few years commuting from Washington. The affection between these great men is expressed in a letter written by Billings to Mitchell in 1904 after being notified of the death of a mutual friend.

. . . One by one, the majority of my old friends have passed away, but so long as you remain, life is still worth living for me . . . When I think of you it is not as a great physician—or as a poet—or as a leader in science—but as 'Weir,' just 'Weir'—And I have a comfortable cardiac (or pre-cardiac) sensation in the thought that I have the right to call you 'Weir.' May you live long to enjoy life as you do and when the end comes—may it be painless and prompt! I mean by this the end of this life—yet I don't think that will be the end for you—but rather that it will be a new beginning. I suppose you have had beginnings before the Nineteenth Century—probably Philip Sidney may have been one of your trial-trips. Be that as it may, you have

been mine in a sense for forty years now—in a rather special way—and I am yours, J.S.B.<sup>1</sup>

Billings came to Pennsylvania, established the first Institute of Hygiene in our country, but left after several years to design and establish the New York Public Library and its system of branch libraries with five million dollars which he had charmed from Andrew Carnegie. This event was chronicled by Fielding Garrison as follows:

On November 27, 1895, Mr. John L. Cadwalader, one of the Executive Committee of the Board of Trustees of the New York Public Library informed Doctor Billings that he had been chosen as the Director of the proposed Library. After due discussion and deliberation, the latter referred the question to Mr. Charles C. Harrison, Provost of the University of Pennsylvania, at the end of the year (December 30th), stating that he had been in the service of the University for five years, during which time the Department and Laboratory of Hygiene had been organized, the University Hospital reorganized, and competent assistants obtained, who could carry on the work without interruption, if he resigned. To this end, he proposed carrying on his university work till the end of the scholastic year at a reduction in salary, in order to give two days in the week to the New York Library until June 1, 1896, upon which date he proposed his resignation should take place. 'I make this request,' he concludes, 'not because I am in any way dissatisfied with my position and work here, nor for the sake of obtaining greater compensation, but because I believe I can best contribute to the public good by undertaking the New York work.' The situation was a delicate and embarrassing one for both sides. Doctor Billings had given hostages to the University of Pennsylvania, he had planned two of its finest laboratories, he had less than a month before being tendered a banquet in the city with a gift of perhaps the largest purse ever raised for a physician by private subscription, and he naturally felt disinclined to resign his professorship without express permission from the authorities of the University.

Yet, so important were the issues at stake, that, largely through the good offices of Doctor Weir Mitchell, the whole matter was adjusted in a few days, the authorities waived their claim in favor of New York, and Doctor Billings resigned his professorship in the University of Pennsylvania to take effect on June 1, 1896.<sup>2</sup>

The banquet referred to was given to Billings in Philadelphia, November 30th, 1895, in appreciation of the vast services rendered to the medical profession for his labors on the *Index Catalogue*. This was accompanied by a unique gift of a silver box containing a check for \$10,000, from 259 physicians of the United States and Great Britain, in grateful recognition of his services to medi-



cal scholars. The contributors to this fund included all the leaders of British and American medicine. The toastmaster of the banquet was Doctor S. Weir Mitchell. These funds were used for Billings' portrait which now hangs prominently in our library.

In 1850 Mitchell spent a year in Paris, studying under Claude Bernard. His stay there was marred by a bout of smallpox and was recently described by Richard Walter as follows: "In addition to attending Bernard's lectures and the microscopy lectures, he took a course on auscultation and ophthalmology. Neither did he neglect the Grand Opera, the museums, the plays, or the Parisian Cafe. But Weir felt dissatisfied with himself; he had not accomplished all that he would have liked, he had lost time because of the smallpox, and time was running out."<sup>3</sup>

Stewart Wolf, in a similar manner, convinced me to leave government service to rebuild the Department of Microbiology at the University of Oklahoma. Like Billings, in this one respect only, I left Oklahoma after several years to establish the International Research Program at the NIH. With characteristic unselfishness, Stewart loaned Doctor Kelly M. West to this program and it was he mainly who was responsible for its success. In addition, Stewart's own interest in international medicine led him to agree to spend a year in Paris serving as the first full-time consultant to our European activities. There he spread good will and brought credit to American medicine as a distinguished lecturer and friend of European medical scientists. There, also, he became interested in the encyclopedic French physiologist, Charles Richet, and wrote a clever history of his contribution to the invention of the airplane. Stewart became interested in Richet after studying the "dive reflex" by dunking the faces of his children into the sink to observe the slowing of the pulse rate, a phenomenon which Richet also studied. Amazingly, as Mitchell left Paris because of smallpox, Wolf acquired hepatitis during his stay and was forced to slow his pace of study and lecturing accordingly.

Later, like Mitchell before him, he gave his talents and energies to the National Library of Medicine as a presidentially appointed member of its Board of Regents.



Figure 5. Doctor Stewart Wolf.

Billings, as our nation's greatest medical librarian, didn't need Mitchell's advice—but he did get his political support for a congressional appropriation to move the National Library of Medicine from Ford's Theatre, where it was housed after the assassination of Lincoln, into a new building which Billings himself designed in every detail. Evidence of this is seen in this letter from a Pennsylvania Senator in which he advises that they take money appropriated by the House of Representatives without amendments by the Senate.

Stewart Wolf worked for NLM in many ways. As Chairman of the Board of Regents he was not only an advisor, but also proved to be a man of action. The present Lister Hill Center for Biomedical Communications in large measure was created through his stimulation and effort. In an editorial which appeared in the May 15th, 1969, issue of *The New England Journal of Medicine*, Doctor Wolf described the need for such a facility as follows:

Much of the process of keeping up with developments requires the physician and medical scientist to travel far and frequently away from his regular responsibilities, his patients, his laboratory or his classroom. Some of these meetings run to tens of thousands of people who crowd into rooms where limited facilities for projection of sight and sound impair his ability to grasp the material—a process that would be readily and effectively carried out at home through modern communication media and at much less cost.

Physicians in medical practice in all parts of the country must deal with incomplete and often poorly presented information, when proper mod-



## Parallelisms / CUMMINGS

ern methods could quickly supply their needs from nearby or even distant teaching centers.<sup>4</sup>

Some men are frightened by, or indeed never contemplate a new career. They may move back and forth like the tide, but never change the imprint of the shores they frequent. Wolf, like Billings, and Mitchell, left his mark everywhere he visited or worked. I am sure Oklahoma will long remember Stewart's contributions as they are remembered at Hopkins, Cornell, and in Washington. I am equally confident that the Texas shoreline will never look the same after he explores and exploits its marine resources. I can see Stewart pouring trouble on their oiled waters in his effort to improve the ecology of man.

For the students and house staff present may I suggest that a more careful study of the men I've touched upon here—Mitchell, Billings, and Wolf—will enrich your social perspective, your appreciation of medicine, and above all your sense of humility. Mitchell wrote, "All the vast hygienic, social and moral problems of our restless, energetic, laborsaving race are, in some degree, those of the future students of disease in America." Wolf writing about the expectations of society was even more eloquent when he said, "The age of automation has indulged us all in a surfeit of laborsaving and lavish comfort. In our part of the world, at least, we have been made relatively secure from

hunger and homelessness. The epidemics that once decimated whole communities have largely been conquered and yet man is not happy, not fulfilled. Neither is he particularly healthy. From a vast number of experiences, man has been shown—but has not altogether learned—that his health and well-being depend not only on his capacity to adapt to the tangible environment, but also to prevailing attitudes and values in his society and to his own goals and aspirations. Repeatedly over the course of recorded history, man's preoccupation with material comforts and convenience has, like an unbalanced diet, somehow sickened him."<sup>5</sup>

Unfortunately greatness sometimes is recognized least in the home or local setting. Often this recognition comes at a time when the principal can no longer be aware of the high esteem he has earned through his actions and contributions. Therefore, on this occasion I ask that you join me in this recognition *at this time and in this place*. I do not wish to stand alone! □

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Fifth Annual Meeting of the

South Central Section

(Arkansas, Louisiana, Oklahoma, Texas)

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## OSMA and Legislature Attack Rural Medical Problem

A new approach to the problem of getting physicians to practice in rural communities is being taken by the OSMA and the Oklahoma State Legislature. Both organizations will begin offering loans to medical students who will volunteer to spend at least two years doing active medical practice in a rural community.

During the 1970 session, the state legislature passed House Bill 1797 which created the Oklahoma Rural Medical Education Loan and Scholarship Fund. The bill provided that the fund would be administered by a Board of Trustees which would consist of the Director of the University of Oklahoma Medical Center and four additional members to be appointed by the Governor. The director of the medical center, James L. Dennis, M.D., serves as Secretary-Treasurer of the Board.

Immediately after passage of the law, Governor Dewey Bartlett named Purcell physician William C. McCurdy as Chairman of the Board. Vice-Chairman is Clyde Barton, M.D., Tulsa, and members are Norman A. Cotner, M.D., Grove, and Ralph L. Buller, M.D., Hydro.

Doctors Cotner, McCurdy and Dennis also serve on the newly formed OSMA Rural Medical Council.

Loans of up to \$5,000 per year can be made by the Medical Education Loan and Scholarship fund to qualified medical students who are bona-fide residents of the state of Oklahoma and who would not otherwise have funds necessary to finance the cost of a medical education. To receive the money it is necessary for the student to enter into a contract with the board controlling the fund agreeing to serve in a rural community in Oklahoma having a population of 5,000 persons or less. For each two years of scholarship, a student must agree to serve at least one year in the community. The contract also provides that the stu-

dent can elect to pay back the loan, and not have it forgiven by rural service. However, the law requires that any repayment must be made in cash with interest at a rate of ten percent per annum.

For its first year of operation the State Legislature appropriated \$25,000 to the Rural Loan and Scholarship Fund. In order for it to continue to operate beyond 1970, it will be necessary for the Legislature to appropriate \$50,000 in 1971, \$75,000 in 1972 and \$100,000 in the fourth year of operation, 1973. This is because of the four years it takes a student to complete medical school. Each year the student would be entitled to an amount up to \$5,000 and would be entitled to a similar amount each year thereafter. If five new students start the program each year and draw the full \$5,000 each, at the end of the fourth year there will be twenty students in the program and the full \$100,000 would be needed.

One of the first actions of the Loan and Scholarship Fund Board of Trustees was to have the student contract drawn up by Mr. Larry Rember, J.D., who was serving as the board's legal counsel. One requirement of the board was that the wife of the student should be required to sign the contractual note and indicate that she is aware of its contents and of its legal significance, and consents to its execution by her husband.

The first five recipients of the rural medical scholarships were selected by the Board of Trustees in late July. (Names of the scholarship winners had not been announced when this issue of *The Journal* went to press.)

During a May meeting of the Board of Trustees of the Loan and Scholarship Fund, then OSMA President Hillard Denyer, M.D., announced that the OSMA has \$10,000 for rural medical scholarships through the

OSMA Loan and Scholarship Fund, Inc. This fund, which has been in existence since 1962, has some \$48,000 in accounts receivable for loans made in the past few years.

Since 1962 the association has paid \$5.00 for each full dues-paying member into the special Loan and Scholarship Fund, Inc., managed by the O. U. Medical School. During the eight years of its existence approximately \$73,000 has been transferred to the fund. Some \$24,000 has been given in straight scholarships based on academic achievement and the remainder has been loaned to medical students on the basis of financial need. The loans were low interest and were to be repaid three years after the student completed his training. Thus, the association now has accounts receivable with about \$48,000.

The OSMA's Committee on Financial Aid to Education reported to the House of Delegates during May that it was the committee's feeling that the association should also establish a fund to furnish scholarships for students who would agree to practice in rural areas or in metropolitan centers of low income and high population density. The committee recommended that the current loan and scholarship fund be rededicated to this new purpose.

The House of Delegates authorized the committee to change the character of the present fund and to study the feasibility of establishing a separate foundation to administer the fund.

The creation of a new foundation was felt to be necessary since the present OSMA Loan and Scholarship Fund does not have any non-medical members. The new foundation would have an open membership available to the lay public.

When the new foundation is created the present Loan and Scholarship Fund Corporation can transfer to it, at the direction of the OSMA



Board of Trustees, the funds necessary to implement action.

In anticipation that the House of Delegates would grant the authority to create the new foundation, OSMA President Ed Calhoon, M.D., named a new Council on Rural Medicine. The council is made up of physicians and civic leaders from throughout the state. Chairman of the council is William C. McCurdy, M.D., and Vice-Chairman is James L. Dennis, M.D. Both Doctors McCurdy and Dennis serve on the state fund along with member Norman Cotner, M.D.

Other M.D. members of the council are Tom Points, M.D., Washington, D.C.; Dale Groom, M.D., Director, Oklahoma Regional Medical Program; Ed Young, M.D., Secretary-Treasurer of the Oklahoma Board of Medical Examiners; Roger Lienke, M.D., Director, School of Family Medicine, O.U. Medical Center; Joe Duer, M.D., Woodward; Bob Hogue, M.D., Guthrie; Jack Fetzer, M.D., Woodward; Charles Tefertiller, M.D., Altus; Thomas Rhea, M.D., Idabel; and Ernest Shadid, M.D., Director of Services, Central State Hospital, Norman.

Two other M.D.s are also on the council. A. B. Colyar, M.D., Commissioner of Public Health for the State of Oklahoma and The Honorable Richard Stansberry, M.D., a member of the Oklahoma State Senate.

Other council members include the Honorable Ernest Martin, Oklahoma State Senate, Ardmore; The Honorable Wiley Sparkman, Oklahoma State House of Representatives, Grove; Ken Hager, Executive Director of the Oklahoma Health Careers Council; Jack Boyd, Director of the Oklahoma Health Planning Agency; Phil Smith, Sc.D., Chairman of the Board of Admissions, O.U. Medical Center; Cleveland Rodgers, Executive Director of the Oklahoma State Hospital Association; Walt Whitlow, Associate, American College of Surgeons Committee on Trauma (Oklahoma); Ken McFall, Executive Director of the Oklahoma Farm Bureau; and Ben Blackstock,

Executive Director of the Oklahoma Press Association.

On July 23rd, the OSMA's Committee on Financial Aid to Education held a joint meeting with the Association's Committee on Planning to discuss the creation of the new foundation. The two committees agreed to recommend to the OSMA Board of Trustees that the foundation be established. In the meantime they have requested the OSMA legal counsel to begin drawing up the necessary papers. The two committees envision that the OSMA foundation would operate in conjunction with that created by the state. Both would probably rely on the administrative personnel of the O.U. Medical School to handle the actual bookkeeping and recommendation for student loans. □

## Postgraduate Short Courses Begin In September

The first of the series of short courses for 1970-71 "Allergic Diseases—Newer Concepts and Management" will be conducted by the Department of Medicine, Department of Pediatrics and the office of Postgraduate Education of the University of Oklahoma Medical Center on September 17th, 1970.

The program is for physicians who encounter acute and chronic reactions in their practices. Presentations, question and answer sessions and roundtable discussions will be the format.

Participating in this first course will be William A. Cain, Ph.D., Robert S. Ellis, M.D., Floyd F. Miller, M.D., Charles M. Haunschild, M.D., Lyle W. Burroughs, M.D., Gerald Vanderpool, M.D., and George L. Winn, M.D.

This year's Thursday short courses will again be held at the Faculty House, 601 N.E. 14th Street, Oklahoma City, where ample parking is available. Registration and luncheon will begin at 11:30 a.m. with the scientific program from 12:00 noon to 4:00 p.m. Each afternoon session is approved for four hours of credit. □

## Emergency Medical Services Subject Of Seminar

Featured speaker at the state's first two-day seminar on emergency medical services will be Oklahoma U. S. Senator Henry Bellmon (R). Being sponsored by the Oklahoma Committee on Trauma of the American College of Surgeons, the meeting will be held September 10th and 11th at the Tulsa Hilton Inn.

Eighteen well known speakers and twenty-three panelists will provide a program designed to acquaint physicians, government officials, ambulance operators and health personnel with the techniques for providing adequate emergency care and transportation of the critically ill and injured.

The program was announced by C. T. Thompson, M.D., Tulsa surgeon and chairman of the Committee on Trauma. In addition to emergency care and transportation the doctor said their program will also emphasize the development of area wide services to compensate for the increasing centralization of medical care and services in Oklahoma.

One highlight of the meeting will be a practical demonstration of medical evacuation by helicopters and equipped ambulances. The demonstration will take place Friday, September 11th.

In addition to Senator Bellmon, other featured speakers will include Governor Dewey F. Bartlett; Tulsa Mayor Robert LaFortune; Representative Ralph G. Thompson, Oklahoma State Legislature; Ed Calhoon, M.D., OSMA President; Joe Gunn, President of the Oklahoma Hospital Association; and Doctor H. Clay Huntley, Director of the Division of Emergency Services of the U. S. Public Health Service.

Registration for the meeting is limited to 350 persons. A registration fee of \$50 per person includes the cost of all meals, including the banquet with Senator Bellmon as the keynote speaker. Advanced registration should be sent to the American College of Surgeons, Suite 915, 6465 South Yale Avenue, Tulsa, Oklahoma 74135. □



## Malpractice Costs Under Attack

A concerted attack on the increasing costs of malpractice or professional liability insurance is being engineered by the AMA. The various approaches being taken were discussed by Richard P. Bergen, Director of the AMA's Legal Research Department, during the Medical-Legal Institute sponsored by the OSMA and the Oklahoma Bar Association in July.

Bergen stated that although there are no accurate statistics on national average premium rate increases for professional liability in the last five years, "a 200 percent increase would be a conservative estimate." He went on to point out that in the last five years an increasing number of physicians have been denied renewal of their professional liability insurance and in many instances there was no apparent relation between their claim experience and the denial.

Bergen said, ". . . malpractice insurance has become an undesirable business risk in recent years. All insurance is based upon educated guesses as to what is going to happen in the future, based on what has happened in the past. These guesses are more difficult to make in relation to medical malpractice than they are in any other insurance field."

The director went on to point out that it takes five years before an insurance company in the malpractice field can determine what its total loss experience has been for any given policy year. Most of the malpractice insurance companies have found that they have been guessing low and had to raise their projections for future losses in order to correct earlier mistakes. In addition, the trend in loss experience for malpractice insurance has been sharply upward. This means that there has been an increase in the volume of claims, or an increase in the average cost of claims, or an increase in both.

Director Bergen then went on to set out the reasons why he thought there had been an upward trend. They are as follows:

"A constantly increasing demand for medical care has resulted in a steady increase in the number of units of patient care per year provided by the average physician. Each unit represents an exposure to a claim. Assuming a constant rate of claims per units of care, the number of claims has risen along with the rise and demand for medical care.

(A unit of medical care was defined as each office visit, hospital call or house call.)

"Inflation is generally accepted as a current fact of life, with all costs rising at an average rate of at least six percent a year. I believe that the costs involved in malpractice claims have been inflated at a rate even higher than the average.

"Courts have steadily followed a trend to make it easier for a claimant to collect damages for personal injury. This trend includes, but is not limited to malpractice suits. It tends to constantly increase the costs and volume of claims.

"The pressure of increasing costs of living, and of increasing taxation, make the average person more ready to sue someone for damages if he suffers some injury, whether it is in an automobile accident or in the course of medical care.

"The number of lawyers who are expert in successfully presenting malpractice claims is gradually increasing. The number is still relatively low, but the increase has had a significant effect on malpractice costs."

To help offset these trends, the AMA is advocating that medical societies should sponsor liability insurance programs for their members. This could be termed "collective bargaining." Programs of this nature, according to Bergen, offer the best assurance of continuing availability of coverage and make it possible for the insurance carrier to make certain that premiums are adequate to meet costs plus a reasonable profit margin.

In addition to the insurance program, the AMA is also developing a "loss control" program to help moderate the insurance costs. The main emphasis will be in the area of patient safety. Patient safety pro-

grams can identify and seek steps to minimize situations which give rise to patient injuries and liability claims.

Another approach being taken by the AMA is to encourage the establishment of patient complaint procedures in hospitals. Claims often arise because no one gives prompt attention to complaints made by patients. Such procedures would help to improve prompt identification of and prompt remedial action for adverse results suffered by patients. It should also help to minimize situations in which minor irritations in patients are allowed to build up to a determination to sue. □

## OU Medical School One of the Largest

The University of Oklahoma School of Medicine this fall will become one of the largest medical schools in the nation in terms of enrollment.

According to new data released by the Association of American Medical Colleges, only 12 of the 106 medical schools in the United States will accept more students than Oklahoma, according to James L. Dennis, M.D., executive vice-president for Medical Center affairs.

The OU medical school will admit its largest class — 135 men and women — in September. This is an increase from a total of 126 freshmen admitted last fall and 109 the year before.

The average size of entering classes in the nation's medical schools in September will be 98, according to the AAMC.

Three schools will accept the same number as Oklahoma and 91 will take fewer first year students, Doctor Dennis said. Only five medical schools accept as many as 200 students per class.

"It is obvious that on the basis of population and per capita income Oklahoma is right at the top in terms of educational effort, number of medical students and the production of physicians per dollar spent," Doctor Dennis added.

Combined enrollment in the four medical school classes next fall will be 485, up from 438 last fall. □



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## Jarman Introduces AMA's Mediredit

During July, Congressman John Jarman of Oklahoma and Omar Burleson (D) of Texas, introduced HR 18587, the Health Insurance Assistance Act of 1970. This bill encompasses the AMA's Mediredit Proposal, which provides tax credits for the purchase of voluntary health insurance.

Two other Congressmen, Richard H. Fulton, (D) Tennessee, and Joel Broyhill, (R) Virginia introduced an identical bill earlier in the month.

Both the bills would furnish vouchers to the indigent so that they might obtain voluntary health insurance coverage for their medical care and provide tax credits to assist others in the purchase of health insurance. Both bills called for the creation of a peer review organization in each state, county, or other political subdivision, for the purpose of establishing a formal system of review of utilization, charges and quality of health service.

Congressman Jarman is chairman of the subcommittee on Public Health and Welfare of the House Interstate and Foreign Commerce Committee. Congressmen Fulton, Broyhill, and Burleson are members of the House Ways and Means Committee, to which both bills have been referred.

As proposed in the bill, the Secretary of HEW would enter into agreements with state medical societies for the establishment of peer review groups. Medical societies would appoint a five member commission and a nine member advisory council. The commission would be composed of physicians with the advisory council having consumer, provider and carrier representatives.

Tax credits for the purchase of voluntary health insurance would be granted on a sliding scale to taxpayers based upon their tax liability with the greatest assistance to low income individuals, and a voucher would be issued to the indigent for the premium.

In order to be eligible for a tax credit on the premium cost, an insurance plan would have to meet the program's minimum basic bene-

fits which would include inpatient, outpatient, extended care, and emergency services, as well as medical services provided by physicians. In addition, the coverage would include one or more of the following: Prescription drugs not otherwise covered; additional days of inpatient and extended care services; and other diagnostic, therapeutic and personal health services. An insurance carrier would also offer a "catastrophic coverage" policy to individuals carrying the basic coverage. □

## PR Committee Plans Mini Health Fair

Part of the observance of the annual Community Health Week will be a miniature health fair in Oklahoma City's Shepherd Mall Shopping Center. The fair has been set for October 8th through 13th by the OSMA Public Relations Committee.

In announcing the fair, Jim Eskridge, M.D., Chairman of the OSMA committee said, "This is an experiment on the part of the medical association to determine if there is interest in this type of exhibit. If this miniature fair proves successful, the association might consider holding a large statewide fair in late 1971 or early 1972."

Each year the OSMA in conjunction with the AMA sponsors a special project entitled "Community Health Week." This special observance gives the two associations an opportunity to promote interest in current health issues.

This year all promotion and publicity will concern health careers, immunization and nutrition. All radio and TV stations and all newspapers in the state will receive public service messages and feature articles on the three subjects.

The miniature health fair will be in addition to the regular promotion. Some 30 health related organizations have been contacted and asked if they will be interested in exhibiting in the fair. According to the manager of Shepherd Mall Shopping Center, some 12,000 persons a day would see the fair without any advance publicity. □

## Tulsa Medical Society Awards Scholarships

The Tulsa County Medical Society has awarded \$3,550 in scholarships to nine students of medicine, nursing and radiologic technology for the 1970-71 school year.

Duane E. Brothers, M.D., President, announced recently that the cash grants would go to:

Michael A. Coffey, 1217 South 129th East Avenue, a freshman at the University of Oklahoma School of Medicine, \$600.00.

Kathleen Michalski, 6734 South 69th East Avenue, a freshman at the University of Tulsa School of Nursing, \$250.00.

Vickie June Wilkinson, 923 South 85th East Avenue, a freshman at the University of Oklahoma School of Nursing, \$250.00.

Mary Doerr, 2112 East Haskell, a second-year student at Hillcrest Medical Center School of Nursing, \$250.00.

Michele Baine, 5510 North Johnstown, a first-year student at St. John's Hospital School of Nursing, \$150.00.

The Doctor Anna Luvern Hays memorial scholarships, named in memory of the Tulsa pediatrician who died in 1965, were awarded to:

Robert C. Ingram, 42 North Lakewood, a freshman at the University of Oklahoma School of Medicine, \$600.00.

Edwin K. McClanahan, 1868 East 27th Street, a sophomore at the University of Oklahoma School of Medicine, \$600.00.

Scholarships contributed by the Woman's Auxiliary to the Tulsa County Medical Society, were granted to:

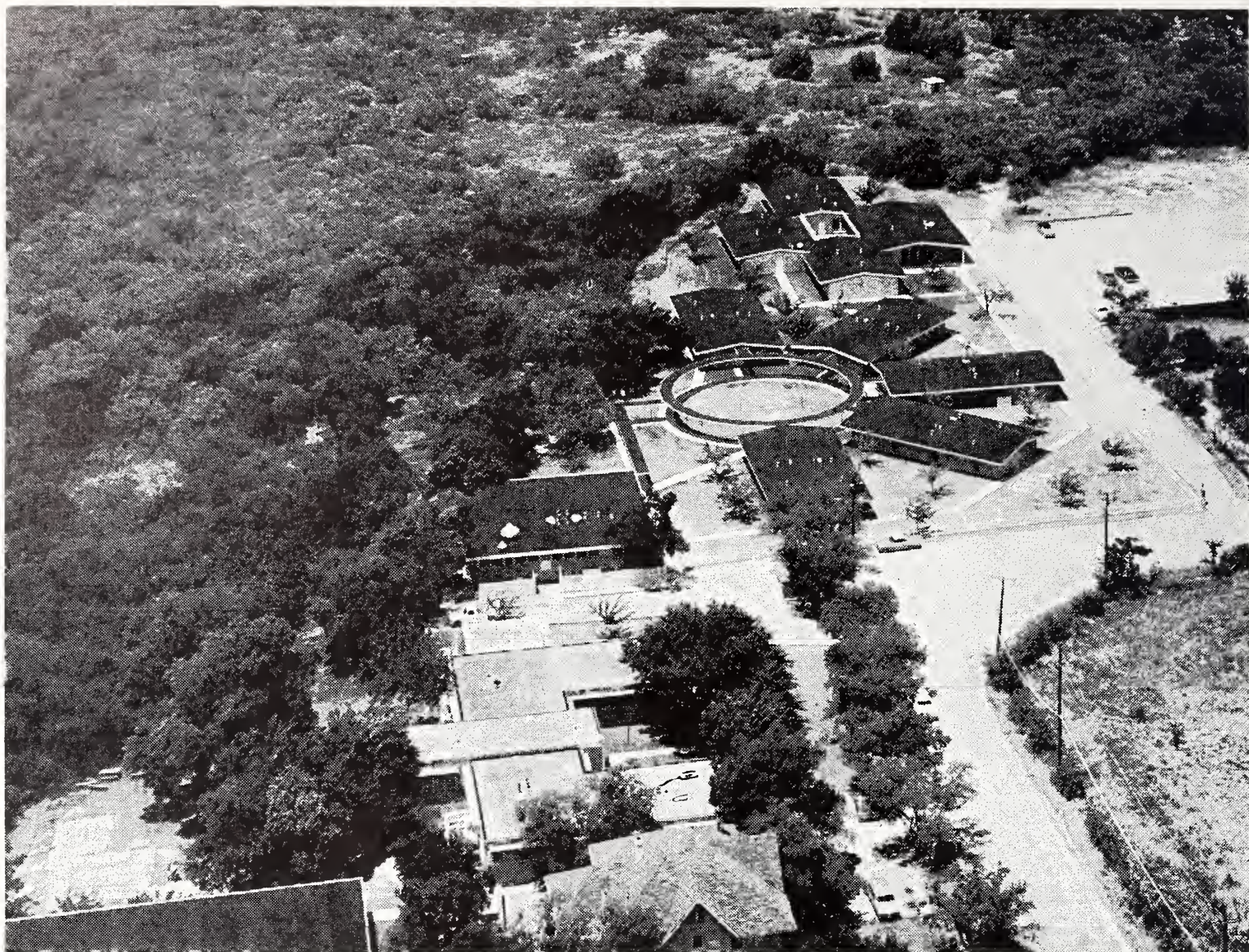
Wayne H. Pue, 5924 East 58th Place, a sophomore at the University of Oklahoma School of Medicine, \$600.00.

Diane Marlene Wilson, 1028 East 37th Place, a sophomore at the University of Oklahoma School of Nursing, \$250.00.

Pue and McClanahan received similar scholarships from the medical society last year.

The awards are made annually to students in health careers. □





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## Colmore Heads Medical Center for Intrim Term



John P. Colmore, M.D., professor of medicine and pharmacology, has been appointed interim executive vice-president for University of Oklahoma Medical Center affairs and interim director of the Medical Center effective September 15th.

The appointment was approved by the OU Board of Regents at its July meeting.

Doctor Colmore will succeed James L. Dennis, M.D., who asked that his resignation as executive vice-president and director be effective on or around September 15th, and will head the medical center until a permanent appointment is made.

Doctor Dennis resigned to accept the position of vice-president for the health sciences and professor of pediatrics at University of Arkansas Medical Center, Little Rock.

An OU medical faculty member since 1952, Doctor Colmore, 48, has been acting associate dean of the school of medicine since February, 1970. He also was given a permanent appointment as associate dean at the Regents meeting.

Doctor Colmore, a native of Tennessee, was graduated from Princeton University in 1943 and received his M.D. degree in 1946 from the Columbia University College of Physicians and Surgeons, New York City. The physician has been director of the Clinical Pharmacology Division in the Department of Medicine at the Medical Center the past nine years. □

## DEATH

HENRY H. TURNER, M.D.

1892-1970

A prominent Oklahoma City physician, Henry H. Turner, M.D., died August 4th, 1970.

A native of Harrisburg, Illinois, Doctor Turner received his medical degree from the University of Louisville School of Medicine in 1921. He also studied in London and Austria before coming to Oklahoma City in 1924. For 44 years he served as a Professor of Medicine at the University of Oklahoma School of Medicine, where he later became Professor Emeritus of Medicine. He was a noted endocrinologist and had lectured throughout Europe and South America.

Doctor Turner served as President of the OSMA in 1940-41 and was a Past-President of the Oklahoma City Academy of Medicine, the Oklahoma City Clinical Society, the American Therapeutic Society, the National Society of Nuclear Medicine, the American Goiter Society and the Endocrine Society which he also served as secretary-treasurer for 25 years. He was the recipient of the Southern Medical Association's Seale-Harris Medal and the Endocrine Society's Certificate of Merit. □

## Changes Proposed for Good Samaritan Act

Oklahoma's Good Samaritan Act will be expanded to provide more protection to doctors who treat persons in cases of emergencies if a measure introduced by Representative Lee Cate of Norman is adopted during the next legislative session. The proposed changes were studied by the State Legislative Council's Committee on the Judiciary during a July meeting.

The measure would amend the present Good Samaritan law of the state to exempt persons rendering emergency care to victims of accidents or emergencies, wherever the service is required, from civil liability or criminal prosecution.

After discussion the Committee on the Judiciary determined that the proposed bill needs to be redrafted to clarify its expressed intent.

Witnesses from the OSMA explained to the committee that there is a difference between working on an accident victim at the scene of the accident and handling an emergency case in a hospital. The present Good Samaritan law clearly covers the physician who stops at the accident site, but the physician handling the patient who comes in

the emergency room is probably not covered.

Since emergency room service is usually one of the requirements for hospital staff privileges, the physician on duty must handle any case that comes in. The OSMA witnesses pointed out that quite often a doctor will find himself handling a medical problem outside of his own specialty. In such cases there is always the fear of a malpractice suit.

R. Barton Carl, M.D., and Kent Braden, M.D., both of Oklahoma City, represented the association. Doctor Carl told the committee that the bill would provide protection to a doctor when he is called upon to take care of a heart patient, for example, when in fact the physician present might be a gynecologist or some other specialist and not a heart specialist. The committee was told that when an emergency develops in a hospital, the best doctor or doctors present may not be specialists in the treatment of the ailment concerned.

In the case of an in-hospital emergency, the law would cover the non-expert physician who is handling the situation until such time as a specialist arrives. □



## BOOK REVIEWS

### HOW TO RAISE A HUMAN BEING.

By Lee Salk, Ph.D., Professor of Psychology in Pediatrics, Cornell University Medical College and Director of the Division of Psychology, Department of Pediatrics, New York Hospital, and Rita Kramer. Cloth, 205 pp. New York: Random House, Inc. 1969.

In the foreword, Doctor Rene Dubos states, "Life would be a dull experience if it were true, as some people believe, that the array of genes a child inherits from his parents determines irrevocably the kind of adult he will become. Fortunately, human development is more complex and more interesting than that, because absolute determination of traits by genes alone is a theoretical impossibility."

This small book is based on the premise that it is easier to prevent emotional ills in infancy and early childhood than to treat them later on in life, an emphatically sound principle. The authors, a child psychologist and a child developmentalist, have drawn from their clinical experience and research to demonstrate the crucial importance of directing the child's early experiences which can determine how he develops later in life to help each child to achieve his fullest potential. They review the recent findings on the nature of the human infant, his capacities and needs, and show how the proper types of stimulation at the beginning of life can prevent later serious emotional disturbance.

The modern pediatrician is expected by parents to be far more than a clinician capable of preventing, diagnosing, and treating physical ailments. He is also expected to have a sound knowledge of the emotional and intellectual development of the child and to guide them towards the fulfillment of rewarding parenthood. Although written primarily for parents, this work will be of value to pediatricians, child psychologists and others working in this area. *Harris D. Riley, Jr., M.D.*

### SURGERY AND AMBROISE PARÉ,

by J. F. Malgaigne. 435 pp., University of Oklahoma Press. \$12.50. Doctor Wallace B. Hamby, who received his M.D. degree from the University of Oklahoma, is a Cleveland neurosurgeon with a strong interest in the history of surgery and a sure knowledge of the French language. The result of his dual interest is this fine translation of a notable biography of Ambroise Paré and a history of surgery before the seventeenth century. A self-educated surgeon of the sixteenth century, Paré learned the fundamentals of his profession on the battlefield and developed a missionary zeal to pass on the knowledge he had gained. Malgaigne's account was an introduction to the last edition of Paré's complete works, published in Paris in 1840. Doctor Hamby's translation brings to English-speaking readers for the first time the story Malgaigne told so well.

### CHILD HEALTH IN HEALTH AND

DISEASE. Edited by Albert Dorfman. 390 pp., 86 illustrations. \$17.50. Chicago: Yearbook Publishers, Inc. 1968.

The papers published in this volume represent the presentations at a symposium celebrating the dedication of the Wyler Children's Hospital and the Kennedy Mental Retardation Research Center at the University of Chicago in the summer of 1966. It is made up of eight major sections with a total of 28 different chapters. The titles of the various sections indicate the broad scope of the monograph:

Problems of Child Health Care Throughout the World  
Law and Social Policy for Children  
Mental Retardation  
Learning and Language  
Cardiopulmonary Problems in Childhood  
Modern Advances in Important Areas Pertinent to Childhood Diseases

Basic Science Aspects Related to Pediatric Problems

Basic Molecular Biology and Genetics—Future Application to the Problems of Children

The contributors are well-known experts from many different countries. As noted from the titles of the various sections, the topics range from General Aspects of Child Care in Developing Countries to Fundamental Problems in Molecular Biology.

Perhaps one of the chief values of this book is the accumulation, in one place, of contributions by many subspecialists contributing to the whole of pediatrics and child health.

This book contains a wealth of data on a variety of different subjects and will serve as a valuable reference for all of those concerned with child health and related facets. *Harris D. Riley, Jr., M.D.*

### ORGANIZATION AND ADMINISTRATION OF HEALTH CARE.

By Richard L. Durbin, A.B., M.B.A., M.P.A., Administrator, Temple University Hospital; Associate Professor, Temple University School of Business, Philadelphia, Pennsylvania, and W. Herbert Springall, A.B., M.P.H., Associate Administrator, Temple University Hospital; Assistant Professor of Hospital Administration and Chairman, Department of Health Care Management, Temple University College of Allied Health Professions, Philadelphia, Pennsylvania. Cloth, 228 pp. St. Louis: The C. V. Mosby Company. 1969. \$9.85.

Until comparatively recently, medical care consisted primarily of the rather personal service rendered by the physician and, in some instances, by a hospital. It is clear that this has changed into a massive industry. The authors examine the many facets in considerable depth.

The book is divided into five parts. One section traces the involvement of government in the delivery of health care services, including the Hill-Burton program and the reports of various health and medical education groups such as the Mills Commission, and Medicare. The remainder of the text is more spe-



cifically directed towards administrative details such as the application of industrial engineering techniques, economic aspects and relation to hospital reorganization. Chapter 12 has an interesting discussion of the concept of the Health University and the gap between health-theory and health-practice. The authors believe that all of the technologic advances common to the largest businesses must be applied in the delivery of health care. Although it contains a great deal of technical, administrative information, this book offers important data for those interested in this crucial problem. *Harris D. Riley, Jr., M.D.*

**ESSENTIALS OF GASTROENTEROLOGY.** By J. Ned Smith, Jr., M.D., Associate Professor of Medicine, University of Missouri, Columbia, Missouri. Cloth, 309 pp. St. Louis: The C. V. Mosby Company, 1969. \$14.75.

As stated in the preface, the purpose of this book is to present, in a brief form, the important aspects of the etiology, diagnosis and treatment of various gastrointestinal disorders. The material is intended primarily for medical students acquiring their initial knowledge of gastroenterology. Selected aspects and the bibliography may also be of interest to graduate physicians. No attempt has been made to include the entire gastrointestinal field.

The book is divided into sixteen chapters dealing with the gastrointestinal history, various organ systems and specific disorders such as peptic ulcer, differential diagnosis of diarrhea and other common problems of the gastrointestinal tract. The coverage appears to be rather uneven. For example, 32 pages are devoted to the esophagus but only 50 pages to the entire subject of the liver and its diseases. The x-ray reproductions are excellent and the printing is of good quality.

This book which is presented in readable style may be useful to medical students and perhaps general practitioners interested in an overview of gastroenterology. *Harris D. Riley, Jr., M.D.*

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## *Making The Grade*

**REMEMBER** to slow down in the school zones.

Keep a lot of change and small bills on hand for lunch money, activity fees and school supplies.

It's really incredible that one girl needs so many clothes in order to go to college!

How in heaven's name can tuition be that much?

I wonder if he really plans to study . . . or just play around.

Doesn't anybody *ever* get a hair cut?

Let's see . . . it was twenty-four . . . no, twenty-five years ago . . .

I wonder if I could make the grade in school today . . .

Had any of these thoughts lately? If not, consider yourself out of it. And if you're out of it, you shouldn't be practicing medicine; you should retire or get into some other line of work. Or go back to school.

Now that it's been suggested, if you ever left school you made a serious mistake. If it's been longer than five years since you considered yourself a student in some formal course of instruction, you may never catch up. You haven't continued your education and, even worse, you no longer qualify as a contemporary in your profession.

Continuing education in medicine is an activity in which every conscientious physician participates. He recognizes that it is his responsibility to keep himself informed of new diagnostic and therapeutic techniques. He understands and accepts this as part of his obligation to patients. He knows that

to engage in the practice of medicine with yesterday's knowledge is to commit a fraud.

Today's physician must spend more time in the pursuit of knowledge simply because there is so much more of it. It is entirely possible that the physician of 1900 could have had, at his disposal, every fact known about a disease, its cause, its manifestations, its effect on the human body, its management and the drugs used in its treatment. It is inconceivable that any single person could, today, claim such distinction. Keeping abreast of the current knowledge in such fields as immunology and intracellular metabolism would, in itself, be a notable accomplishment for any practicing physician.

Some of us argue that experience is the best route to knowledge; that one can read all the books and attend all the classes available but that, without experience, nothing is really learned. Certainly the value of experience should not be deprecated but if you believe it is the paramount source of knowledge, answer this question, honestly: Would you feel secure in the experienced hands of a 1920 physician?

If you are not currently engaged in a program of continuing education or, if you are smugly confident about your knowledge and experience, you need to take immediate action. You are not fulfilling the terms of the contract you have with your patients and your profession or you are not even aware of your ignorance. In the first condition you are committing a crime; in the second, a sin.

Get busy with your education and stop wondering if you could make the grade today. Find out. *M.R.J.* ☐





When Oklahoma was admitted to statehood, many men were practicing the healing arts by virtue of being self-declared physicians. These men had little or no formal training, oftentimes only having served short apprenticeships with ec-

lectic background proceeded to care for the ill. Many of these men became quite proficient in certain specialty fields, old bone setters - obstetricians surgeons, etc. With the coming of statehood, these men became "Sooner Doctors" and a licensure was established with more rigid qualification.

Much has been written and scientific data have shown that prior to 1917, a patient's chances of survival with the care of a physician were, on the average, about as great as with this man's service.

Continuing education and recognition of its inherent value have combined to give the American physician the greatest spectrum of information available to a professional man.

The AMA strongly believes that all physicians should continue their education on a regular basis to maintain high standards of professional competence. This has become almost policy while the courts, through various malpractice decisions against physicians, practically decreed its need. The legal phrase "res ipsa loquitur" (the thing speaks for itself) is almost cliché and we can no longer use ignorance as an excuse.

Your own state medical association has a plan underway whereby physicians from metropolitan areas will act as "locum tenens" or simply relieve the men in small communities thereby enabling them to continue their postgraduate training. The American Medical Association has a special Recognition Award for continuing medical education and I strongly recommend your investigation of the program.

The self-satisfied physician whose mind is closed to further training and professional medical change is like the "occasional surgeon"—a potentially dangerous practitioner. Let us continue to improve our professional competence by keeping abreast of new developments in medicine. □

Sincerely and fraternally,

*E. L. Carlson M.D.*



# Management of Completed Stroke

THOMAS P. ANDERSON, M.D.

EARLY BED MANAGEMENT OF  
COMPLETED STROKE

*Teamwork and full utilization of community and family resources are essential to the successful rehabilitation of the stroke victim. Knowing how to do all that can be done may prevent much of the pessimism usually shared by patients and physicians.*

## INTRODUCTION

**B**EFORE EVALUATING the patient with completed stroke and planning management, one should take the time to ask himself, "Is this truly stroke?" and consider the many other conditions which can simulate stroke, such as subdural hematoma, neoplasm, metastases, ischemia secondary to hypertension, infection, and intoxication due to drugs, alcohol, diabetes, or myxedema. It is rare that stroke is the only medical problem with which a patient presents. Usually planning management has to take into consideration some of the common concomitants of stroke such as hypertension, atherosclerosis, cardiac problems and diabetes. This consideration of management of completed stroke is divided into three principal sections, mainly on the basis of chronology: Early Bed Management; Getting Out of Bed and Into the Wheelchair; Later Care and Learning to Walk.

This paper was presented at the Oklahoma City Clinical Society meeting in Oklahoma City, October 27-29, 1969.

In this first stage of management, emphasis is placed on prevention of complications of stroke which are actually avoidable, but unfortunately are often considered natural developments in the history of completed stroke.

### *Prevention of Contractures*

Contrary to the popular idea, contractures in the patient with completed stroke are much more the business of the nurse than they are of the physical therapist, because with good nursing care they can be prevented and thus never require the attention of a physical therapist. The two principal methods the nurse should be asked by the physician to use in preventing contractures are (a) proper bed positioning with frequent turning and (b) passive range of motion exercises. Most recently graduated R.N's have already had rehabilitation nursing training and experience so will understand such orders by the physician. For those nurses who are not familiar with these techniques, there are available excellent and extensive monographs that are well illustrated and published for the expressed purpose of self-teaching for nurses.

### *Prevention of Intellectual Regression*

Probably the most common complication in completed stroke is the intellectual regression associated with sensory deprivation, and all the added complications that develop as a consequence of prolonged sensory depriva-



tion and resulting intellectual deterioration. During the acute phase, the stroke patient is often placed in a single room. Even when he is in an intensive care unit, he may be placed so that when he lies on his back or on the one side to which he can turn, he is able to see only the ceiling or the wall and never gets any stimulation from his environment. The nursing personnel and physicians often have a tendency to speak of the patient in the third person, even in the presence of the patient, particularly during the acute phase, and then tend to persist in doing this after the patient's comprehension begins to improve. Without external stimulation from the environment, even the most well integrated personality tends to deteriorate rapidly. This happens in the stroke patient too. When sensory deprivation is prolonged, the patient soon develops depression, often blamed on brain damage rather than on the environmental situation. With depression, plus physical disability, the patient has an increasing dependency on the nursing personnel. Dependency frequently leads to resentment and hence, the patient becomes an increasing problem in nursing care. When this withdrawal, apathy, and depression are permitted to persist, it doesn't take long before physical breakdown begins to develop. The presence of one small decubitus ulcer can increase the expense of hospitalization by \$3,000 to \$5,000.

Hence, it is desirable for the physician and the nurse to communicate with the patient in the first person. Whether or not he understands well, he should be shown this respect. He should be encouraged to move himself in bed frequently with the unaffected arm and leg. Sitting up either rolled up in bed, or on the edge of the bed is highly desirable and is often postponed much too long for no particular reason, except over-cautiousness. One of the simplest ways for the patient to begin regaining his self-esteem is by learning to feed himself. Most stroke patients can learn to do this within the first 48 to 72 hours after onset of the stroke, if given the opportunity, even with the nondominant hand. Another important factor in regaining self-esteem by the patient is the planning of bowel and bladder training programs by

the physician and nursing service. With the development of urosheath drainage, the indwelling catheter may be avoided in male patients. Getting the patient out of bed onto a bedside commode as soon as feasible, particularly at the times when the patient usually has his bowel movement, can often prevent even the onset of bowel incontinence and thus avoid one of the leading factors in enhancement of depression in the stroke patient.

#### GETTING OUT OF BED AND INTO THE WHEELCHAIR

*When can a stroke patient start being up in a wheelchair?*

Most authorities agree that the patient can start getting out of bed into a chair just as soon as the stroke has stabilized. The problem is in determining when the stroke has stabilized or has become completed. Some physicians feel that this stage has been reached when there has been no further evidence of neurologic progression for 48 hours. Most physicians leave patients in bed long after this period.

*What activities can the patient start doing when permitted to sit up?*

Just sitting on the edge of the bed dangling gives the patient an opportunity to start re-developing his sense of sitting balance which is essential when he later begins learning to dress himself, and is good preparation for developing standing balance for walking. The patient can also be transferred from the bed to other places to sit, particularly in a wheelchair. Instead of being lifted bodily, a satisfactory method of transfer can be worked out using either a sliding board or by having the patient stand, pivot, and sit down in a wheelchair. Other types of transfers can also be developed at this point, such as wheelchair to toilet and vice-versa, to bathtub, to cars, and many others.

Also at this point when the stroke has stabilized, the patient can begin learning to perform his personal toilet in order to lessen his feeling of dependency on the nurses: such things as brushing his teeth, combing his hair, shaving, application of makeup, and even assisting with the daily bath. The patient who is permitted to sit up in a wheelchair for short intervals feels that he is



really getting over being a patient especially if he is dressed during those intervals. Nurses can help train a patient in the one-handed techniques of dressing himself, which can still be done at this sitting stage in completed stroke. A desirable exercise for the patient at this time is that of learning how to operate a wheelchair, unassisted. If the leg rest is removed on the unaffected side, he can use both the unaffected foot on the floor and the unaffected hand on the wheel for propelling and guiding the wheelchair, and soon become independent in moving about the ward by himself in an easy, non-stressful type exercise.

#### Examples Of Various Orders The Physician Can Write for the Nurses Caring For His Patients With Completed Stroke

1. Maintain positioning of affected extremities and turn frequently.
2. Carry out passive range of motion exercises for the involved arm and leg twice a day.
3. Roll the patient in bed up to a sitting position frequently for short intervals, as tolerated.
4. Encourage the patient to use the unaffected arm and leg for moving himself in bed and learning to pull himself up to a sitting position on the edge of the bed.
5. Encourage patient to practice maintaining a good sitting balance while sitting on the edge of the bed, holding to the siderail.
6. Encourage the patient to learn to feed himself.
7. Offer urinal frequently to avoid accidents and incontinence.
8. Teach the patient to help in his transfer from bed to commode, or from bed to wheelchair.

---

*A 1943 graduate of the University of Oklahoma School of Medicine, Thomas P. Anderson, M.D., received his M.S. in Physical Medicine and Rehabilitation from the University of Minnesota in 1951. He is presently with the Kenny Rehabilitation Institute in Minneapolis and is also Director of the Department of Postgraduate Medical Education of the American Rehabilitation Foundation.*

9. Start patient using bedside commode.
10. When sitting on the edge of bed is well tolerated, then start patient getting into wheelchair for short intervals several times a day as tolerated. As transfers improve, try progressing to toilet transfers.
11. Modify wheelchair by removing footrest on the uninvolved side; make sure patient's uninvolved foot is able to reach the floor and that the involved foot is on a footrest.
12. Teach the patient how to use uninvolved foot and hand to propel and guide wheelchair.
13. Install overhead rope and pulley apparatus on patient's bed so that he can practice self assisted stretching of the involved shoulder.
14. Help the patient learn to dress himself.

#### LATER CARE AND WALKING TRAINING

*When is the stroke patient ready to start walking training?*

The majority of physicians tend to postpone unnecessarily walking training and must be encouraged by the physical therapist or the patient's family to begin walking training. The requisites for walking training are:

- a. Ability to follow instructions.  
Even though the patient may have marked impairment in comprehension of verbal directions, he may be able to learn readily from nonverbal directions, such as demonstrations.
- b. Ability to maintain standing balance when transferring.
- c. Absence of contractures in hip and knee flexors and heel cords.
- d. Unimpaired position sense in the involved lower extremity.

In the past it has been thought that patients with impaired proprioception and position sense could not learn to transfer their weight to that side irrespective of how much return of voluntary motor function was present in the lower extremity. However, more recent experience has shown



that a physical therapist under the direction of a physiatrist, both of whom are familiar with these problems, can train the patient to stabilize the hip and knee of the involved lower extremity adequate for independent walking in spite of sensory impairments.

- e. Adequate return of voluntary motor function in order to stabilize the hip and knee on the affected side.

How much return of voluntary motor function and strength in the affected lower extremity is necessary for stroke patients to learn to walk? Only the hip extensors are necessary. They can serve not only to stabilize the hip but also the knee by pulling backward on the femur. For paralysis of the foot and ankle muscles a footdrop brace can accommodate so that with only the hip extensors functioning it is possible to walk on the affected leg. Unfortunately, examination of the patient lying supine in bed does not always reveal the return of function in the hip extensors. It often requires getting the patient into a standing position before this function can be demonstrated.

Often the physician can get a hint that the patient is ready for gait training by observing him during transfers from bed to wheelchair. While the patient is standing beside the bed holding on to a siderail, he can be asked to attempt to shift his weight back and forth from one lower extremity to the other. This is usually the way the physical therapist begins gait drills with the patient holding on to a handrail or parallel bar. If the knee tends to buckle, the therapist may use a temporary, adjustable kneelocker brace. When the patient can maintain balance and stabilize the involved hip and knee, the physical therapist initiates forward progressing, taking steps to bring the involved leg through. With further progress the patient is moved to a four point cane, which is usually preferable to a crutch and finally, if feasible, to a single ended cane. Gait training is not completed until the patient has learned to climb and descend stairs (both

with and without handrails), maneuver himself over curbs and walk out of doors over rough or irregular ground as well as over deep carpeting.

*What are the common problems of the completed stroke patient which interfere with walking?*

#### A. Paralysis and Weakness.

Although many would consider paralysis or weakness the most obvious problem interfering with gait, it is usually the one of least importance in preventing the patient from walking since function is required only in the hip extensors. In some patients with completed stroke, there is spasticity in extension which isn't true return of voluntary motor function, but certainly can be utilized for stabilizing the hip and knee, particularly when the quadriceps are involved. Sometimes a patient's ability to lock the knee is interfered with when a footdrop brace that has a strong spring is used; it tends to push the knee forward into flexion. However, this interference can usually be controlled through trial and error adjustments of the Klenzak type footdrop brace, so that there is spring action adequate to lift the toes, but not enough to prevent the knee from locking. Function in the hip abductors is desirable but is not essential since weakness can be accommodated by the patient using a support in the opposite hand.

#### B. Spasticity.

##### 1. Diminish enhancing factors.

When spasticity and/or clonus are pronounced enough to interfere with walking training, consideration should be given to diminishing all of the many factors which can enhance spasticity such as painful contractures (probably the most common factor), any other condition which causes pain or discomfort (such as ill fitting shoes, bunions, corns), fears and anxieties.

##### 2. Bracing.

Long legged braces are rarely, if ever, indicated for the stroke patient. If spasticity is marked, a simple coiled wire type brace is usually not adequate and either a spring type Klenzak or a right angle stop brace is required. The right angle stop ankle joint is unphysiologic and undesirable if the spring type can adequately control the spasticity. The myth that the spring action type brace enhances spasticity and clonus is un-



true. Spasticity in the inverters of the foot frequently tends to pull the foot out of line so that the patient bears weight on the outer quarter of his foot. This can be corrected with the addition of an outside 'T' strap to the shoe and brace. Improperly fitting shoes sometimes enhance spasticity. A flexible shank allows the front of the foot to pull down in spite of the brace. A rubber soled shoe will allow the foot plate of the brace to irritate the sole of the foot and sometimes stimulate more spasticity. Therefore, the optimal shoe is one with a steel shank, stiff counter, leather sole and rubber heel.

### 3. Motor Endplate Blocks.

In experienced hands the use of three to six percent phenol to temporarily block the most active motor endplates in a spastic muscle sometimes reduces the spasticity sufficiently that its weaker antagonistic muscles can begin to function better. By the time the effect of the phenol has worn off in three weeks to six months, the improved pattern of motion can be maintained in spite of return of full function and strength in the most spastic muscle group.

### 4. Cold Packs.

These can help reduce, temporarily, the amount of spasticity in some patients so that advantage can be taken immediately afterwards for gait training.

### C. Contractures.

The structures most commonly involved are heel cord, hip flexors, knee flexors, and hip adductors in that order of decreasing frequency. Subtle contractures of the hip flexors are often overlooked by the physician, particularly when the patient is lying supine on a soft mattress. To demonstrate subtle contracture of a hip flexor, the examiner has to flex both the patient's knees to his chest, then while holding the uninvolved knee tightly against the chest to keep the pelvis locked in its most flexed position, the other lower extremity is lowered into full extension. Subtle contractures of the heel cord are sometimes missed because they are looked for when the patient's knee is slightly flexed, thus releasing the fixation of the origin of the gastrocnemius. It is necessary to hold the knee in full hyperextension before mild contractures of the heel cord can be demonstrated by the examiner. Ideally, the development of contractures is prevented

by good nursing care, proper positioning and daily, passive range of motion exercises. However, when contractures have occurred, the patient should have stretching exercises administered by a physical therapist. These are quite different from the range of motion exercises that are performed by the nurse. Mild contractures are probably the most common enhancement of spasticity. The two processes tend to form a vicious cycle type of relationship. When the contracture gets worse it enhances the spasticity. Increased spasticity tends to cause more rapid development of contractures. Increasing contracture becomes painful and thus causes increasing spasticity, and so the patient's problems tend to multiply.

### D. Sensory loss in the lower extremity.

The physical therapist can use a variety of ways of overcoming impaired position sense in the involved lower extremity of the stroke patient. The most common one is the use of vision. The patient actually watches his knee in order to perceive that the knee is stabilized in extension before transferring his weight to that side.

## WHAT ARE THE COMMON PROBLEMS IN THE INVOLVED UPPER EXTREMITIES?

### A. Weakness and Paralysis.

Generally, 90 percent of patients with completed stroke do not regain a useful hand. There may be considerable return of voluntary motor function in the shoulder and elbow groups that are not of much use if the hand is not functional. Ten percent of patients who are fortunate enough to get back enough return of voluntary motor function in the involved hand to make it at least a useful helping hand usually begin getting return of voluntary motor function within the first three weeks. Generally, the earlier the return of function, the better the prognosis. After three months, it is reasonable for the physician to advise the patient and his family that they should not count on any significant further return of motor function in the upper extremity. In a limited number of patients with good motor function in the shoulder and elbow groups but some weakness persisting in the hand and wrist groups, weak function in the latter two can be improved by new methods of neuromuscular



facilitation exercises. Physical therapists and occupational therapists are familiar with these techniques. Most occupational therapists can provide positioning splints for the paralyzed hand or dynamic functional splints for the weak hand.

B. Subluxation of the Shoulder.

When paralysis of the shoulder muscles is severe, subluxation of the shoulder sometimes cannot be avoided, but it can be kept from being uncomfortable to the patient through the use of an arm tray on the wheelchair and a sling when the patient is up walking.

C. Dependent Edema of the Hand.

This also can be prevented or improved by the use of an elevated arm tray on the wheelchair and the use of a sling when the patient is up walking. In addition, elevation of the hand and forearm on pillows when the patient is lying in bed.

D. Contractures.

The examiner is often unable to demonstrate a subtle contracture of the shoulder, the type most common in the completed stroke patient, when he tests for this with the patient in the upright position. The patient must be lying supine, with his weight on the scapula to help stabilize it, to bring out the contracture which, even though mild, can be severe enough to cause pain and discomfort. Patients can be taught to perform range of motion exercises using the unaffected hand, but this is not very effective when performed upright. Even when lying supine, this method of maintaining full range of motion in the shoulder is not as effective as the use of overhead rope and pulley which enables the patient to perform self assistive stretching exercises. The optimal placement of the pulley is not directly over the head of the patient, but two or three feet behind the patient as well as above. If left untreated, the contracture of the shoulder can progress and increase rapidly. It can lead to the development of reflex sympathetic dystrophy and does so much more frequently than is often recognized. As it develops, the patient often begins to complain of stiffness in the hand on awakening. Early signs are mild puffiness or edema on the dorsum of the hand and sometimes on the dorsum of the fingers

between the m.p. and proximal i.p. joints. Beyond the proximal i.p. joints the fingers tend to blanch and become pale, smooth, and glossy. The palm of the hand is cold and sweaty, particularly after attempting stretching exercises of the shoulder. When reflex dystrophy is unrecognized and permitted to progress, extension contractures of the fingers develop so that the fingers cannot be forced into full flexion. The development of reflex dystrophy calls for intensive management measures and warrants consultation by a physiatrist.

OTHER EVALUATIONS USEFUL  
IN PLANNING MANAGEMENT

The standard routine history and physical examination of the patient with completed stroke, no matter how expertly carried out, does not reveal adequate information for the physician planning management of his patient. The evaluation of functional ability and the amount of dependency will help identify specific disabilities so that nurses, physical therapists, occupational therapists, and others can direct their activities toward helping the patient regain his independence and feel less disabled. Completed stroke is probably outstanding among the chronic illnesses which call for more than the standard family history and social history. The physician can understand his patient much better and plan management for him if he uses a system which enables him to evaluate the patient's view of himself in his entire life situation. Then, also, the physician has to consider whether to ask for consultations by the psychologist and by the speech clinician. Such further evaluations will now be considered separately.

A. *Evaluation of Function and Dependency.*

How does the patient with completed stroke see himself . . . disabled? Does he see himself as totally disabled or only partially disabled? What is, to him, the most important aspect of his disability? These questions can be answered more readily if an evaluation of function is carried out according to a check list of activities of daily living and self-care. This evaluation can be carried out by the physician, the rehabilitation nurse, the physical therapist, or the occupational therapist. Of course, it is most mean-



ingful to the physician when he himself makes this review of the individual patient. The following six categories are useful guides in making the evaluation:

1. Ability to move in bed and rise and come to a sitting position on the edge of the bed.
2. Ability to transfer from the bed to wheelchair, to the toilet, to the bathtub, etc.
3. Ability in locomotion, including propelling wheelchair, walking, and stair climbing.
4. Dressing self.
5. Performing personal toilet, such as combing hair, shaving, applying make-up, bathing and independence in taking care of bowel and bladder functions.
6. Self feeding.

There are methods available of scoring each of the six categories numerically, so that the patient can be re-evaluated periodically and rescored as he progresses in his planned management, which permits his physician and others working with him to be more objective in setting goals for the patient's care and in implementing them. This system also states the goals of management in terms of action which the patient can understand and pursue in his daily treatment and routine. This permits the patient to become more objective in his perception of his disability and his treatment program so that he can improve his function and independence in these areas. Incidentally, it also serves as a good motivational device to the patient when the evaluation is repeated periodically.

#### *B. Life Situation Evaluation.*

The physician who is limited by time but is sincere in wanting to understand what the presence of completed stroke has done to his patient will meet frustrations if he depends entirely on the medical social worker for this information. However, it takes only 10 or 15 additional minutes of his time to sit down with the patient and follow a systematic inquiry designed to develop a much improved understanding of the meaning of the stroke to his individual patient. He needs to explore the patient's view of all areas of his life situation, not only what he was like before his stroke, but also how the patient views himself changed by the stroke. These

areas are his vocation, his role in his family, and his role in the community. Additional useful information is obtained through an interview with the patient's family in order to learn what attitude they have about stroke in general, how they have reacted specifically to the patient's stroke and what attitudes they have about the patient's future. This information is particularly pertinent when planning an after-discharge program for the patient and in conducting follow-up visits.

#### *C. Psychological Evaluation.*

In planning management of the completed stroke patient, the physician may obtain specific help from consultation with a clinical psychologist or psychometrist, particularly if he is faced with some of the following questions:

Can this patient learn?

How complex a task can he master?

What kind of realistic goals can we set for this patient?

What and how extensive are the patient's emotional reactions to the stroke?

There is no simple relationship between brain damage and behavior of the individual patient. Determining the anatomical location and size of the intracranial lesion is not very helpful to the physician in understanding his patient's limitations of mental function and his emotional response to the stroke. It is easy for the physician to recognize reductions in verbal intelligence in his stroke patients, particularly when the left hemisphere has been involved. However, when the right hemisphere has been involved, some of the perceptual problems causing impairments in visual-motor and visual-spatial functioning is much more subtle, yet sometimes more disabling to the patient than the reduction of his verbal I.Q. The psychologist can evaluate these and help to better delineate deficits in memory, judgment, and ability to plan ahead. Visual field cuts are not limited to patients with left hemiparesis. Decisions on whether the patient should be allowed to drive an automobile again can often best be determined after the psychologist's evaluation. The clinical psychologist has also been helpful to the physician, nurses, and others working with the patient in pointing out that emotional lability or crying is not evidence of depression. For the patient who exhibits



behavior problems on the ward, the assistance of the clinical psychologist in helping to promote behavior modification may open up a new and rewarding area in patient management.

*D. Evaluation of Communication Impairments In Completed Stroke.*

Communication disorders in completed stroke are no longer viewed simply as motor aphasia or sensory aphasia, both of which have become outmoded terms. The speech clinician can provide excellent guidance for the nursing personnel, physician, and others coming in contact with the patient sixteen or more hours a day, for they in reality are the ones who are carrying on the communication therapy with the patients. A speech clinician should serve as their guide. Many problems in communication do not involve aphasia, i.e., a word finding problem, but involve the speech mechanism (dysarthria) or planning and executing a motor act (oral apraxia and oral verbal apraxia). It is important for the patient's family to be counseled on how they should conduct themselves in communicating with the communication impaired stroke patient. It is not only the patients with severe communication impairments who should be evaluated by the speech clinician. Sometimes the stroke patient who is eager to go back to his old job, or another job, may have only subtle impairments in numerical concepts and arithmetic processes or slight reduction in reading and writing skills. Such patients should also be evaluated in an effort to prevent failing an attempt to resume employment.

ADDITIONAL QUESTIONS FOR THE PHYSICIAN

*A. Where can the physician find personnel available in his own community to assist in the evaluation and treatment of his stroke patient?*

The community hospital is not the only institution which can provide personnel for aiding the physician in evaluating his patient with completed stroke. Often the public health nursing agency has physical therapists and speech therapists. Public schools often have psychologists and speech therapists. Sometimes these specialized health

personnel can also be found in state and county health agencies, regional mental health centers, and some of the private health agencies, such as Easter Seal, Cerebral Palsy, and Cancer Societies. In planning the care of the patient following his discharge from the hospital, home health aides and homemakers services can be utilized.

*B. What happens to the patient with completed stroke after his discharge from the hospital?*

Studies have shown that the majority of stroke patients deteriorate and do not maintain the high level of function they demonstrated at the time of discharge from the hospital unless the physician prepares not only the patient but also his family for a home program of maintenance and follow-up to provide supervision of a home program. Families frequently need extensive orientation in the entire concept of residuals of completed stroke. Most families have a tendency to overprotect the patient at home and keep him always a patient, totally dependent upon them rather than allowing him to function as an independent individual with a partial disability. Medical social workers function well in this area of family orientation and in development of the home program plan for the patient. A useful device which gives the physician insight on how things will go at home is the trial weekend at home before actual discharge from the hospital followed by an evaluation of the patient and family responses. It is at this point that the medical social worker can be a great assistance to the physician by arranging for some agency or service such as public health nursing, home health aides or homemakers services to help out in the home.

*C. Which cases should be referred to a rehabilitation center?*

Patients with completed stroke who have communication disorders that need evaluation, those with severe perceptual disorders that have markedly low performance in daily activities, patients with sensory deficits in a lower extremity who are having difficulty learning to walk, the presence of severe spasticity or severe paralysis or weakness . . . any one of these cases should be considered for referral to a rehabilitation center for evaluation and possible training.



There are also some patients with only mild residuals of completed stroke who can be benefited by treatment in a rehabilitation center. The patient with some return of function in an involved hand should be evaluated in order to determine whether the hand can be developed to the level of a helping or even a dexterous hand. When there is a question of the patient's vocational potential and he is eager to return to his old

job or undertake a new one commensurate with his limited abilities, the rehabilitation center with a pre-vocation unit can be helpful. For the female patient who wishes to resume her role as a homemaker, some rehabilitation centers offer homemaker evaluations and training which can help her to function much more independently and efficiently in the home. □

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# New Aspects in the Therapy of Parkinsonism

ROBERT G. FISHER, M.D.

*New aspects in the surgical and medical therapy are presented. Eighty-nine patients have been treated with L-Dopa over a two-year period. About two-thirds of the patients have benefited.*

PARKINSONISM has been a most difficult disorder to treat. Traditionally, anticholinergic drugs such as Artane,<sup>®</sup> Akinetin, Cogentin,<sup>®</sup> etc. have been used in an attempt to change the clinical pattern of tremor, rigidity and bradykinesia; but, their efficacy has not been outstanding and their usage has not altered the course of the disease. Surgical procedures have been done but results were not uniformly effective until Cooper<sup>1</sup> performed operations on the globus pallidus and later, the thalamus. His surgical discovery was quite by accident. He had intended to perform a pedunculotomy—a procedure directed at cutting some of the motor fibers in the midbrain—which was an accepted procedure for Parkinsonism. However, he inadvertently tore the anterior choroidal artery and, to his surprise after clipping this, the patient was not hemiplegic as he had anticipated but was rid of his tremor on the opposite side. Through a series of innovative procedures, he then designed cryothalamotomy, a procedure that destroys a part of the postero-lateral portion of the thalamus by a freezing technique. Tremor and rigidity were thus greatly improved with a low morbidity and mortality rate—less than five percent. The results were such that the neurosurgical facilities throughout the world accepted this procedure enthusias-

tically. However, the surgical procedure, or its many modifications, did not alter the relentless downhill progression of the disease. Patients became disabled because of bradykinesia, gait disturbances, rigidity and postural deformities. The operation was destructive of a portion of the brain that facilitated tremor.

In 1960, it was shown<sup>3</sup> that dopamine, a simple amine compound, was depleted from the basal ganglia of patients having Parkinsonism and it was noted that these patients had much less dopamine in their urine than normal subjects. Destructive lesions in the substantia nigra of animals caused a depletion of the dopamine in the striate body, thus indicating an interrelationship. Several investigators then set out to determine whether oral administration of dopamine, D-L-Dopa or L-Dopa would be effective. Dopamine was found not to enter the brain and early reports on the use of dopa were discouraging. Finally, Cotzias and his co-workers,<sup>2</sup> in 1967 indicated that many of the symptoms and signs of Parkinsonism might be reversed by relatively large doses of L-Dopa. Many centers have been stimulated by this work and several reports within the last year attest to the effectiveness of the drug, although side reactions are numerous.

In 1968, Mr. Alan Greenberg, a graduate of the University of Oklahoma residing in New York City, established through a generous donation the Mr. and Mrs. Ted Greenberg Neurological Research Fund (Parkinson Research Fund) at the University of Oklahoma Medical Center in order to investigate improved methods, whether surgical or medical, in the handling of patients with Parkinsonism and allied disorders. Soon thereafter, additional surgical equipment and a special stereotaxic frame were



purchased in order to facilitate greater accuracy in the surgical procedures. The Fund also permitted a program to be established that allowed L-Dopa to be administered. This program had to be approved by the Food and Drug Administration and they insisted that laboratory data such as CBC, UA, FBS, SGOT, BUN and ECG be monitored at regular intervals. We repeated the CBC and UA on each return visit but found neither the Fund nor the patients could afford the remainder of the tests being done at monthly intervals. All patients were warned that this was an experimental drug and that there might be serious reactions such as stroke, heart attack, bone marrow depression, kidney failure or even death.

Soon the project was sponsored by the Oklahoma Neurological Society and the combined efforts of the Division of Neurological Surgery and the Department of Neurology. The co-investigators have been Doctors Harry Wilkins, Alvin Rix, Richard Carpenter, Thomas Parker, Richard Dotter, Daniel Stough and Joe Hartzog.

The drug was purchased from Nutritional Biochemicals Corporation at approximately 30¢/500 mg. capsule. The trust fund originally purchased the drug without charge to the patient, but rapid depletion of funds demanded that those patients able to purchase the drug do so. However, the fund has supported many patients unable to purchase the drug. One must realize that some patients require eight to ten capsules (500 mg.) per day in order to aid their condition. The cost may approach \$1,000 per year per patient! In 1970, Hoffman-LaRoche pharmaceutical company designated the University of Oklahoma Medical Center as one of the centers to receive free supplies of the drug for a few patients on an investigative basis. This support will soon cease in view of the fact that the drug is now on the open market. The Roche Co. and the Eaton Laboratories are now the suppliers of the drug for the open-market. Market names for L-Dopa are "Larodopa®" (Roche) and "Dopar®" (Eaton).

We established a clinic for the survey of patients having Parkinsonism. We started treating patients with L-Dopa in November, 1968 and initially insisted that all patients in the survey be admitted to the hospital for

further evaluation and therapy. All patients underwent a general and neurological examination, internists reviewed their cases and all lab studies performed. The degree of tremor in all extremities and the head, rigidity and bradykinesia or akinesia were especially observed. Attention was paid to gait, posture, facial expression, position of the eyes and lids, the degree of speech disturbance or drooling and the presence of seborrhea. We were interested in whether patients could turn over in bed, get out of a chair, climb stairs or bathe themselves. We also recorded a pre-drug sample of their writing and routine simple procedures such as the length of time required to pick up six coins, to walk 25 feet backward and forward four times and their hand strength as measured quantitatively by dynamometer was checked.

We admitted to the project all patients having Parkinsonism, regardless of age, sex, color, length of illness, degree of disability, clinical findings or the fact that they had or had not had surgery. However, we did not treat patients who were senile or overtly psychotic. We found a very low incidence of major illness such as cardiovascular disease or cancer in this group. In Oklahoma and surrounding states, many people were disturbed because we were unable to include them in the project, but we were "swamped" with requests and had to refer them to other physicians in the area who had access to the drug.

We managed these patients with caution; at first, we used 500 mg. daily, increasing by 500 mg. every week until a dose of four grams/day was reached. Later we increased the dosage more rapidly and found that nausea and vomiting were frequent side reactions, a fact which caused us to return to a slower rate of increase. Realizing that serious side reactions were not common, we then managed many of our patients as outpatients, seeing them at weekly intervals and later decreasing to one, two or three-month intervals. The neurological examination was repeated at each visit.

## RESULTS

In our series, 89 patients were studied and treated with L-Dopa. There were 63



males and 26 females, quite in agreement with most series which indicate that the male is a more frequent victim. The average age in this group was 62.5 years and the average duration of illness was ten years. The age category by decade is as follows: 0-20 none, 30's = 3, 40's, = 5, 50's = 20, 60's = 41 and 70's = 20.

Of the 89 patients, 45 were actually victims of the influenza epidemic of 1918 with many of these patients having had dementia with high fevers. Twelve patients had undergone bilateral thalamotomy while 17 others had undergone a unilateral procedure. Most of the procedures had rid the patients of the contralateral tremor and very few neurological deficits were encountered. We started to treat our first patient in November, 1968, so our longest followup results are less than two years and the average followup, one year.

We have established criteria for our long-term results as follows: Excellent (no disability), Stable (no noticeable changes in condition and no noticeable progression of the disease), Good (slight disability, no significant deterioration and some definite improvement), Fair (improvement of overall status not significant; major disability still present), Poor (slight or questionable improvement with regard to one manifestation of the disease or no alteration in the progression of the disease), Questionable (results so dubious that medication stopped on physician's orders), Discontinued (medication stopped as result of intolerant side effects such as nausea or obvious ineffectiveness of the drug).

With the above classifications, the first three cases should be regarded as satisfactory. Sixty-two percent fell in the first three categories while 38 percent fell in the last three. We have seen some extremely dramatic results with dopa therapy—loss of all of the disease manifestations—but also there have been some very disappointing results. Rigidity and bradykinesia are the symptoms most frequently relieved. We have not found it effective in relieving tremor and we cannot substantiate reports that 66 percent of patients having tremor are relieved.<sup>5</sup> We found actually very few patients

having had their tremor relieved, despite the fact that as much as five or six grams per day were given in some situations.

We were greatly impressed with those patients demonstrating relief or improvement in bradykinesia or rigidity. They were able to roll over in bed, get out of bed more readily, get out of chairs more quickly, get into a car with less difficulty and a few in their 60's and 70's could actually run, something they had not done in many years. Physicians and patients alike must be warned that increased activity increases the risk of fractures due to falls. Many of our patients decreased the time limit for walking 25 feet backward and forward four times and many were greatly improved on the "coin test." Facial expressions were improved and the frozen "deadpan" disappeared in many cases. We were concerned about five patients in whom the drug had to be increased with time, introducing the question of drug tolerance. We also realized, early in the project, that at least six months should be allowed to elapse after the optimum dosage of the drug had been obtained in order to achieve some of the best results. Our attempts were directed at getting eight capsules (four grams) per day to patients.

Only one-third of the patients with impaired speech were aided. Excess salivation was alleviated in most. Results in the advanced, bed-ridden patients were not impressive and contractures in ambulatory patients neutralized much of the benefit of relieving rigidity. Blepharospasm was not frequent but was relieved in about one-half of the cases where it was present. Further comment should be made about the gait. This was improved in about 60 percent with better balance, turning and arm-swinging. Petits-pas (small, ineffective steps) was found to be responsive to the drug in about 50 percent of the cases, only to return in some patients, at a later stage, despite continued treatment.

We divided our followup categories into three study groups: *Group I*: Those who had not been operated but who were placed on L-Dopa therapy alone. There were 37 patients with an average followup of 12 months. Sixty-five percent of results were excellent, good or fair and 35 percent were unsatisfactory. *Group II*: Those who



had not been operated upon but who were placed on L-Dopa and anticholinergic drugs. There were 22 patients with an average followup of 12 months. Fifty-nine percent of results were excellent, good or fair and 41 percent were unsatisfactory. *Group III:* Those who had been operated upon and placed on L-Dopa and anticholinergic drugs. There were 27 patients with an average followup of 12 months. Seventy percent of results were excellent, good or fair and 30 percent were unsatisfactory.

In order to obtain the above results, Mrs. Elizabeth Soltero, the medical secretary for the project, tabulated the results we had recorded, thus avoiding our prejudices. This series has not been subjected to statistical analysis. It is interesting that the best overall results seemed to be in those who were receiving L-Dopa and other drugs and who had been operated upon with a unilateral or bilateral thalamotomy.

The serious side reactions include nausea and vomiting in about two-thirds of the patients and dyskinesias or chorioathetoid movements in about one-third. Nausea and vomiting came on early in the course of therapy and was difficult to treat, despite the use of "Vistaril," "Compazine," tincture of belladonna, etc. It is a reaction which seems to improve with time and instead of using 500 mg. increment dosage increases, we would suggest 100 mg. or 250 mg. increment increases. Dyskinesias are refractory to all medication and are directly related to higher dosages of the drug. They involve the face, lips, mouth, eyes, head and extremities. The patient may not be bothered but the family is. The drug should be reduced in dosage and the dyskinesia will improve or disappear.

We had two psychotic reactions. One was

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*A 1942 graduate of the University of Pennsylvania School of Medicine, Robert G. Fisher, M.D., has been certified by the American Board of Neurological Surgery. He is presently Professor of Surgery (Neurosurgery) at the University of Oklahoma Medical Center. Among Doctor Fisher's medical affiliations are the American Association of Neurological Surgeons, the American Academy of Neurological Surgery and the American Board of Neurological Surgery.*

probably latent schizophrenia and the other probably a senile reaction intensified by the drug. Both improved with cessation of therapy. We observed no abnormal depressions of the white blood cell count or changes in the hemoglobin which were of any magnitude. No marked aberrations were found in the urinalyses and only mild changes in the BUN and SGOT were seen. We have observed no vascular accidents of the brain or heart, but dosages generally have been below five grams per day. Hypotension has been found in about one-third of our patients but there have been very few, if any, symptoms attributable to it.

## DISCUSSION

Parkinson's disease is no longer one of the scourges of mankind. Newer methods of therapy, stimulated by surgery of the globus pallidus and thalamus and aided by the remarkable neuropharmacologic therapy of L-Dopa now allows the patient having Parkinsonism to face the future not with hopelessness, but with knowledge that medical and/or surgical therapy will aid his condition. No doubt further research, particularly in understanding the basic pathophysiology of Parkinsonism such as disturbance of the nigrostriatal pathways involving dopa and dopamine, will enable progress to be made in treating the disease. One gains the impression that newer drugs will facilitate better methods of therapy. At the present time we are working on EX 10-029, an experimental drug for tremor. We also have been attempting to obtain monoamine oxidase inhibitors for use and study. These substances will decrease the amount of L-Dopa necessary because they inhibit the metabolic change of dopa in the periphery so that more may enter the brain. We have also asked for permission to combine EX 10-029 with L-Dopa.

We hesitate to define the ultimate role of surgery, but there is no question that surgery is at the present time the most effective way to manage the tremor of Parkinsonism. This is a destructive operation involving areas in the thalamus and we are interested now in constructive surgery such as the installation of dopa or dopamine into areas of the brain where it may be found deficient.



The drug is now available as produced by Roche (Larodopa) and Eaton (Dopar) pharmaceutical companies. L-Dopa is still an expensive medication and dosages range up to 12 to 16 capsules daily. We would like to suggest a regimen which might be helpful for physicians in Oklahoma. The patient should undergo a history, physical and neurological examination in order to determine whether he has Parkinsonism. He should be placed on baseline anticholinergic drugs unless they produce untoward results. Certainly it would be wise if the patient were to have baseline laboratory determinations such as hemoglobin, hematocrit, WBC, differential and EKG. Should the anticholinergic medications not be effective, we would suggest that the case be reviewed by a neurologist to see if L-Dopa therapy would be in order. If it is agreed that it would be helpful, then we would suggest that the patient be started on 500 mg. daily for three days increasing this by 500 mg./day every three days until a total dosage of four grams daily is achieved. The capsule or tablet should be taken with food and eventually two with each meal and two at bedtime. If there is intolerance, then we suggest 250 mg. capsules be used six to eight times per day with gradual increases as indicated. "Vistaril,<sup>®</sup>" 50 mg. taken with each meal may alleviate nausea. Should dyskinesias become troublesome we recommend that the dosage of the drug be reduced. There are some patients who are completely unable to take the drug, despite the use of antinauseants. One should be aware of all complications.

At the second conference on "Larodopa,<sup>®</sup>" held at the Hoffman-LaRoche Company in Nutley, New Jersey on June 18, 1970, quite a series of side effects were reported and should be emphasized.<sup>4</sup> These included 20 percent of patients in whom the hemoglobin and hematocrit fell but eventually returned to normal. Twenty-four percent showed elevations of FBS but the observers did not believe that "Larodopa" was the cause for this. Thirty-one percent showed elevation of uric

acid in the blood but no gout was manifested. EKG changes with arrhythmias were common and it was stressed that great caution should be used in patients with a history of myocardial infarction. The EEG was slowed in quite a number of patients. Psychotic reactions were not uncommon and the drug should be stopped immediately should they occur. Nausea and vomiting and dyskinesias were noted as we have reported in our own series.

It is not specifically required, but I suggest that physicians order a CBC and UA on all cases once or twice a year while their patients are on this medication. We also stress that great caution be used in ordering the drug for patients having had a myocardial infarct.

#### SUMMARY

(1) The drug L-Dopa has proven to be an efficient therapy for Parkinsonism. (2) Recognition should be stressed that this is not a cure-all. Our finest results occurred in those patients who had successful bilateral thalamotomies with L-Dopa and adjunct medications. (3) The drug is expensive—we appeal to the pharmaceutical concerns to eventually reduce their prices. (4) We have treated 89 patients for an average followup of one year without fatality or serious accident although side effects such as nausea, vomiting and dyskinesias have occurred in many. (5) We have suggested a course of therapy that may be of help to physicians in the State of Oklahoma and have indicated that aid with this regimen may be obtained from the neurologists in this state. □

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**Indications**—Essential hypertension; edema or ascites of congestive heart failure, cirrhosis of the liver and the nephrotic syndrome; idiopathic edema. Some patients with malignant effusions may benefit from Aldactone, particularly when given with a thiazide diuretic.

**Contraindications**—Acute renal insufficiency, rapidly progressing impairment of renal function, anuria and hyperkalemia.

**Warnings**—Potassium supplementation may cause hyperkalemia and is not indicated unless a glucocorticoid is also given. Discontinue potassium supplementation if hyperkalemia develops.

*Usage of any drug in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the mother and fetus.*

**Precautions**—Patients should be checked carefully since electrolyte imbalance may occur. Although usually insignificant, hyperkalemia may be serious when renal impairment exists; deaths have occurred. Hyponatremia, manifested by dryness of the mouth, thirst, lethargy and drowsiness, together with a low serum sodium may be caused or aggravated, especially when Aldactone is combined with other diuretics. Elevation of BUN may occur, especially when pretreatment hyperazotemia exists. Mild acidosis may occur. Reduce the dosage of other antihypertensive drugs, particularly the ganglionic blocking agents, by at least 50 per cent when adding Aldactone since it may

potentiate their action.

**Adverse Reactions**—Drowsiness, lethargy, headache, diarrhea and other gastrointestinal symptoms, maculopapular or erythematous cutaneous eruptions, urticaria, mental confusion, drug fever, ataxia, gynecomastia, mild androgenic effects, including hirsutism, irregular menses and deepening voice. Adverse reactions are infrequent and usually reversible.

**Dosage and Administration**—For essential hypertension in adults the daily dosage is 50 to 100 mg. in divided doses. Aldactone may be combined with a thiazide diuretic if necessary. Continue treatment for two weeks or longer since an adequate response may not occur sooner. Adjust subsequent dosage according to response of patient.

For edema, ascites or effusions in adults initial daily dosage is 100 mg. in divided doses. Continue medication for at least five days to determine diuretic response; add a thiazide or organic mercurial if adequate diuretic response has not occurred. Aldactone dosage should not be changed when other therapy is added. A daily dosage of Aldactone considerably greater than 75 mg. may be given if necessary.

A glucocorticoid, such as 15 to 20 mg. of prednisone daily, may be desirable for patients with extremely resistant edema which does not respond adequately to Aldactone and a conventional diuretic. Observe the usual precautions applicable to glucocorticoid therapy; sup-

- Hyperkalemia may occur, especially in severely ill patients with relatively small urine outputs or in patients receiving supplemental potassium. However, with Aldactone, because of its mechanism of action, hyperkalemia<sup>3</sup> should be less likely than with triamterene or other agents which act independently of aldosterone.
- Gradual onset of action avoids the danger<sup>4</sup> of sudden electrolyte and fluid depletion.
- May be effective as the sole diuretic or may be combined with a thiazide, furosemide<sup>5</sup> or ethacrynic acid<sup>6</sup>.

plemental potassium will usually be necessary. Such patients frequently have an associated hyponatremia—restriction of fluid intake to 1 liter per day or administration of mannitol or urea may be necessary (these measures are contraindicated in patients with uremia or severely impaired renal function). Mannitol is contraindicated in patients with congestive heart failure, and urea is contraindicated with a history or signs of hepatic coma unless the patient is receiving antibiotics orally to "sterilize" the gastrointestinal tract.

Glucocorticoids should probably be given first to patients with nephrosis since Aldactone, although useful for diuresis, will not directly affect the basic pathologic process.

For children the daily dosage should provide 1.5 mg. of Aldactone per pound of body weight.

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**Adverse Reactions:** Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

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duce dosage in proportion to age and weight.

**How Supplied:** Bottles of 50, 500 and 1,000 tablets.

**References:** (1) Sand, R.X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, J., and Kay, L.L.: Southwest. Med. 42:30-32, 1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Clin. Med. 4:307-310, 1957.



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# Arizona Group Gastroenteritis

M. DEWAYNE ANDREWS, M.D.

*Arizona infections, easily confused with Salmonella, are an infrequently recognized cause of human gastroenteritis and other diseases and indicate possible sources of error in diagnostic bacteriology.*

**H**UMAN GASTROENTERITIS, at best a vexatious problem, is characterized by many possible etiologies. Salmonellosis, shigellosis, cholera, infection with enteropathogenic *E. coli*, staphylococcal food poisoning, and, of course, the ubiquitous "viral" entity are well known causes. Not as well appreciated but indicated by a growing body of evidence is the possibility of infection with bacteria which are closely related to members of the genus *Salmonella*, viz., the Arizona group. Recognition of this possibility requires appreciation of its similarities to and differences from the *Salmonellae*. This report presents a case of human Arizona group gastroenteritis. In addition, several aspects of the Arizona group and infections of man are reviewed.

## CASE REPORT

W.K. (NMH 39-05), a 21-year-old Caucasian male, was admitted to the hospital on August 4, 1969. The patient had been in excellent health until the morning of admis-

sion, when he developed nausea and vomiting, malaise, colicky abdominal pain, frequent watery stools, fever and chills. The patient had ingested food and water only from his home during the previous 48 hours; no other members of his family experienced similar symptoms. Of interest is the fact that about one week prior to admission the patient had been in contact with a dog which had diarrhea. The rest of the history was non-contributory.

**Physical Findings:** Pulse 100/min., regular; B.P. 124/80; Resp. 28/min.; Temp. 40° C. The patient was an athletic young adult who appeared mildly dehydrated and acutely ill with a shaking chill. The skin was warm, moist, of poor turgor, and no lesions were observed. A soft grade I (I-VI) systolic ejection murmur was heard at the pulmonic area. The abdomen was scaphoid with hyperactive bowel sounds; the spleen, soft in character, was felt with the patient in the right lateral decubitus position; there was slight diffuse tenderness with no localization. The rest of the physical examination was not remarkable.

**Laboratory Findings:** Hgb. 14gm/dl, Hct. 45 percent. Red cell morphology normal. WBC 18,850 (85 percent neutrophils, four percent bands, eight percent lymphocytes, three percent monocytes). Urinalysis: normal. BUN 13 mg/dl, CO<sub>2</sub> 26 mM/L, Cl<sup>-</sup> 111 mEq/L, Na<sup>+</sup> 139 mEq/L, K<sup>+</sup> 3.5 mEq/L. The stool was *trace* positive for occult blood, and leukocytes were observed microscopically. Chest x-rays were normal.

**Hospital Course:** Multiple cultures of stool, blood and urine were taken, and the patient was placed in isolation. Intravenous

From the Newman Memorial Hospital, Shattuck, Oklahoma. This case presented while the author was on preceptorship service at NMH.



fluid and electrolyte replacement was started, and ampicillin 500 mg. was given intravenously followed by ampicillin 250 mg. I.V. every six hours. Diphenoxylate hydrochloride ("Lomotil®") was used to control diarrhea. The patient's diarrhea abated; the urinary output remained satisfactory; but spikes in the temperature up to 39.6° C. occurred continually at approximately 12 hour intervals. Urine and blood cultures were negative (the latter remaining so over three weeks). The stool cultures grew *E. coli*, *Streptococcus faecalis*, *Aerobacter* sp., and a non-lactose fermenting organism which on TSI and IMViC tests appeared to be of the genus *Salmonella*. The suspected organism was sensitive to chloramphenicol. On the third hospital day, ampicillin was discontinued, and oral chloramphenicol three grams (50 mg/kg) daily in divided doses was started. Specimens of the stool cultures were referred to a laboratory in Oklahoma City for identification and serotyping. The suspected organism turned out to be not of the genus *Salmonella* but a member of the Arizona group (confirmed by the State Health Department), being identified by dulcitol fermentation and gelatin liquefaction. No serotyping was done. The Arizona organisms were sensitive to chloramphenicol, colistin and streptomycin; they were resistant to ampicillin, cephalothin, kanamycin, neomycin, penicillin and tetracycline. Within 24 hours following initiation of chloramphenicol therapy, the patient had a remission in febrile episodes and continued afebrile the remainder of his hospital stay. The other symptoms and signs also resolved rather quickly. On the seventh hospital day the chloramphenicol was reduced to two grams/day; the patient received a total eight day course of chloramphenicol, being monitored with CBC with differential counts every 48 hours with no adverse effects observed. The patient was discharged on August 13, 1969. He was seen one week later for followup and was asymptomatic. Stool cultures then and at the time of discharge grew only normal flora organisms. Extensive inquiry resulted in no clues as to epidemiology other than that stated in the history.

The Arizona group is composed of bacteria closely related to the genus *Salmonella* but distinguishable from it by biochemical means. The organisms are gram-negative, nonsporulating, motile bacilli which may ferment lactose rapidly, slowly or not at all. Formerly designated as members of the paracolon bacilli—a term so vague as to be almost useless—the Arizona group now is included in the *Salmonella*-Arizona-Citrobacter division of the family *Enterobacteriaceae*.<sup>5</sup> Several instructive discussions concerning the Arizona group have been published.<sup>6, 7, 8, 13, 17</sup>

The first description of an organism now classified in the Arizona group was by Caldwell and Ryerson<sup>2</sup> who isolated a bacterium from diseased reptiles found in Arizona. They designated the organism *Salmonella* sp. (Dar-es-Salaam type, var. from Arizona). Even though recognizing that they did not quite fit the typical characteristics of the genus *Salmonella*, Kaufman<sup>14</sup> later classified the organisms as *Salmonella arizona*. The first indications that the Arizona cultures were a definite group of *Enterobacteriaceae*, differing biochemically from any known genera, were provided by Peluffo *et al.*<sup>17</sup> Serologic classification of the Arizona group was undertaken by Edwards *et al.*<sup>9</sup> utilizing 456 cultures from reptiles, fowl, mammals, man and egg products. They were able to show a complex antigenic structure and cross-reactions with *Salmonella*; serotypes were demonstrated to be epidemiologically significant. Edwards and Ewing,<sup>5</sup> in the 1955 edition of their manual on the *Enterobacteriaceae*, showed more clearly the position of the Arizona group within that family.

That Arizona group organisms are rarely found in normal subjects, infect man and are pathogenic has been recognized many times, although the true incidence of human infections is unknown. In one of the earliest cases, Edwards<sup>4</sup> reported a member of the Arizona group in an 11-month-old baby with acute colitis. Ferris *et al.*<sup>11</sup> provided the first good evidence for pathogenicity in man in reporting an epidemic of gastroenteritis in Australia, where the organisms were cultured from 26 of 29 patients. Two outbreaks



in the United States, apparently caused by Arizona group organisms, were described by Murphy and Morris,<sup>16</sup> who also demonstrated that following infection patients developed antibodies against the corresponding Arizona strains, a phenomenon which has been observed repeatedly. Plows *et al.*<sup>18</sup> described the first case of human Arizona gastroenteritis in Britain in 1968.

Arizona infections have not been limited to the gastrointestinal tract. Seligman and Saphra<sup>19</sup> first isolated the organism from blood in an eight-month-old child with diarrhea and fever. In addition to stool and blood, the organisms have been found in otitis media,<sup>1</sup> urine,<sup>8, 13</sup> osteomyelitis,<sup>12, 15</sup> septic arthritis,<sup>13, 15</sup> hepatic abscess,<sup>15</sup> brain abscess, pleural and spinal fluids and conjunctival exudate.<sup>8</sup> In a review of 87 cultures isolated from man, Edwards *et al.*<sup>8</sup> found only one instance in which a known pathogenic form, *Shigella flexneri* 2, was found in association with any of the Arizona group serotypes.

Most of the available evidence indicates that man acquires Arizona infection by the oral route. The greatest single source of human disease appears to be poultry products; eggs and egg products are common sources of Arizona infection. Direct transmission from man to man without intermediate food sources may occur occasionally. Animal reservoirs seem to have some influence on the appearance of infections in man.

The pathology and pathogenesis of Arizona infection are similar to that of the *Salmonellae*; and cases of Arizona infection seem to be just as severe as, if not more severe than the usual case of salmonellosis. Some evidence indicates that the Arizona types are actually more invasive than most *Salmonella* serotypes.

Clinical manifestations depend upon the nature of the infection and usually present as one of four syndromes: gastroenteritis, enteric fever, bacteremia or localized infection. Symptoms of gastroenteritis usually develop two to forty-eight hours after ingestion of contaminated food. Nausea and vomiting are common initial manifestations, followed by colicky abdominal pain and persistent diarrhea. The stool may contain blood and pus. Chills are not unusual, and fevers of 38° to

40° C. are common. Not infrequently, headache is present. In severe cases, prostration may occur. The severity of the symptoms may be quite varied, even among patients infected at the same time. Symptoms may persist for a few days to several weeks, merging into the enteric fever syndrome, the latter being difficult in many cases to separate from gastroenteritis. Although there is a paucity of data, it appears that the leukocyte count is usually normal. The organisms can be isolated from the stools of almost all patients during the acute illness. Whether a chronic enteric carrier state exists is not well defined.

Manifestations of enteric fever, bacteremia and localized disease due to Arizona infection are quite similar to those seen in infections with the *Salmonellae*.

Diagnosis of Arizona gastroenteritis on the basis of clinical information alone is quite difficult, and definitive diagnosis depends on isolation of the causative organism from the stool. In patients with enteric fever, bacteremia or localized infections, blood cultures may be positive, or organisms can be isolated from pus or exudate in localized infection. Agglutinins against the causative organism develop, but agglutination tests have not been applied in most cases.

The biochemical methods used to identify the Arizona group are relatively simple, and several schema have been well defined.<sup>3, 5, 10</sup> As with all enteric bacilli, a good initial plan is to culture on EMB and/or MacConkey's agar, SS agar, an enrichment broth such as selenite or tetrathionate and perhaps deoxycholate agar. Where indicated, blood cultures should also be made. The major differentiation in the usual instance is made first between lactose and non-lactose fermenting or-

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ganisms, the latter being considered pathogenic. This procedure may lead to error in attempting to diagnose Arizona group infections. Solowey and McFarlane<sup>20</sup> showed clearly that Arizona cultures may produce acid and gas from lactose within 24 hours. It is estimated that a majority of Arizona organisms ferment lactose rapidly, i.e., within 18 to 24 hours, with the remainder fermenting lactose slowly or not at all. (Though not truly consistent, serotype 10:1,2,5 is the most frequent example of the latter.) Where it is the routine practice to discard lactose fermenting colonies, many cultures of Arizona group actually may be missed. Therefore it is impossible currently to make any valid statement regarding the incidence of members of the Arizona group in normal or diseased individuals. The situation is comparable to recognizing that certain *E. coli* serotypes are pathogenic and indicates the disadvantage inherent in adherence to lactose fermentation as an absolute screen in enteric bacteriology.

Isolated colonies, lactose or non-lactose fermenting, should be subjected to TSI slant agar, IMViC and additional tests when necessary. The members of the Arizona group are most often confused with the *Salmonellae*. As shown in Table 1, the reactions are quite similar.

Table 1  
COMPARISON OF BIOCHEMICAL REACTIONS FOR  
TYPICAL ORGANISMS

REACTION	<i>Salmonella</i>	<i>Arizona</i>
H <sub>2</sub> S production	+	+
Gas from glucose	+	+
Fermentation of		
Lactose	—	±
Sucrose	—	—
Mannitol	+	+
Adonitol	—	—
Dulcitol	+	—
Inositol	±	—
Salicin	—	—
Indol	—	—
Methyl-Red	+	+
Voges-Proskauer	—	—
Simmons' citrate	+	+
Motility	+	+
Urea	—	—
KCN medium	—	—
Gelatin liquefaction	—	+ (delayed)
Lysine decarboxylation	+	+
Phenylalanine deamination	—	—

It is evident that the critical tests for differentiation of Arizona from *Salmonella* are dulcitol fermentation and gelatin liquefaction. Differentiation of Arizona from *Edwardsiella* can be made utilizing sorbitol when necessary.<sup>3</sup>

Serotyping of members of the Arizona group can be done but is not necessary. Numerous somatic (O) and flagellar (H) antigenic groups have been identified of which many cross-react with *Salmonella* antigens. The two most common serotypes in human disease are 7:1,2,6 and 10:1,2,5.

As in most cases of gastroenteritis, the most important aspect of management is correction of dehydration and electrolyte disturbances. Abdominal cramping and diarrhea may be relieved with appropriate drugs. The use and effectiveness of antibiotics in these cases are problematical. Chloramphenicol (50 mg/kg) and ampicillin have been the two most widely used agents; cephalothin and cephaloridine have been reported to be effective in some cases.<sup>13</sup> In any case, the choice of antibiotics should rest on sensitivity tests unless the patient's condition is such that early medication is deemed necessary. In the present case, the clinical response following initiation of chloramphenicol therapy may have been coincidental, but on the other hand, one can as easily assume that the drug materially affected the patient's course. In Arizona bacteremia, enteric fever and localized infections, the usual ancillary measures should be taken in addition to antibiotic therapy.

The prognosis in most cases of Arizona group gastroenteritis is excellent. Only a few cases have been fatal. Some may persist as an enteric fever syndrome. The more serious systemic infections are accompanied by a correspondingly worse prognosis. There are no accurate figures available in this area of inquiry.

SUMMARY

A case of human gastroenteritis caused by infection with Arizona group bacteria (members of the family *Enterobacteriaceae*) is presented. Historical recognition of the group and important clinical and laboratory considerations are reviewed.

Infection with Arizona group organisms



usually results in one of four syndromes: gastroenteritis, enteric fever, bacteremia or localized infection. Diagnosis is dependent upon laboratory identification of the causative organism. Since many serotypes ferment lactose slowly, or not at all, adherence to this test as a screen frequently may lead to diagnostic errors. Treatment consists of supportive measures and usually chloramphenicol or ampicillin. The prognosis usually is good.

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## *Medicine in the American Revolution: I*

VIRGINIA R. ALLEN

*Fatal experience has taught the people of America the truth of a proposition long since established in Europe, that a greater proportion of men perish with sickness in all armies than fall by the sword.<sup>1</sup>*

**S**TORIES OF THE American Revolutionary War battles and their heroes are familiar to all Americans. The names of the physicians who cared for or failed to care for those heroes are little known yet their impact was a vital element of that war. The medical men of the Continental Army had neither military rank nor authority. Although denied the status and incentive of officers and hampered by inadequate facilities and supplies, most army physicians and surgeons served tirelessly and to the best of their ability. They suffered the same privations and many times contracted the same diseases as their patients. For their efforts, they were often maligned, poorly

paid or frequently unpaid with their salaries sometimes as much as two years in arrears.

The influence of colonial doctors, who were prominent members of colonial society, extended far beyond the realm of medicine. The First Massachusetts Provincial Congress included twenty-one doctors. Six doctors signed the Declaration of Independence. Ten doctors died while serving in a military capacity at Lexington and Concord and twenty-nine physicians served at Bunker Hill. General Joseph Warren, a highly respected physician, was killed at Bunker Hill while serving as a military officer. General Warren had been president of the First Provincial Congress of Massachusetts and it was he who sent Paul Revere to arouse the minute-men.

Mortality rates from disease were very high with approximately nine American soldiers dying from disease for every one killed by the British. After the Battle of White Plains, five times as many deaths occurred in the hospital at Bethlehem as in the battle.<sup>2</sup> A soldier had ninety-eight chances out of one hundred of eluding death on the battlefield, but the odds of leaving a



hospital alive were only seventy-five in one hundred.<sup>3</sup>

The heavy mortality in the Continental Army is explained partially by the limitations of eighteenth century medicine in general and partially by colonial conditions. Medicine was still medieval with no understanding of infection or asepsis. Surgery was primitive and anesthetics were unknown. The number of practicing physicians in the colonies is estimated to have been thirty-five hundred, but probably less than two hundred of these were graduates of European medical institutions.<sup>4</sup> America lacked well-trained doctors, hospitals, medicines, surgical instruments, bandages, bedding, and many other necessities. In addition, Congress lacked an understanding of the nature and dimensions of the problems and delayed too long seeking their solutions. Everywhere the ill lacked the essentials—food, shelter, and clothing.

The medical department of the Continental Army was assailed by intrigues from within and by attacks from without. Doctor John Cochran, the last director general of the department, was the only one who left office with his record unmaligned and the only one who received the cooperation of the whole medical department. Verbal and printed charges which would now result in libel suits were made against the medical department and its physicians. The petty jealousies and bickering of the early days of the department resulted in suffering, disease, and death and consequently affected the outcome of many battles. Only after the Continental Congress corrected many of its mistakes and recognized medical needs, could the physicians work in concert.

Effects of disease on the British Army also had a significant impact on the war. Cornwallis and his entire staff was once so ill that his army was virtually without command. During the summers of 1780 and 1781, Cornwallis' army in the Carolinas was so sick that large-scale action was impossible. The Seventy-first British Regiment reported two-thirds of its men unfit for duty in the summer of 1781.<sup>5</sup>

Among the worst examples of mortality and mal-treatment of the sick were the British prisons. The British used ships, churches, and open sugar houses to hold

American prisoners. They were without adequate food, heat, and care. Overcrowded in ships' holds, prisoners usually lacked even sufficient air. In one instance, fifteen hundred American prisoners died within a few weeks.<sup>6</sup> In Charleston harbor, eight hundred died on the prison ships.<sup>7</sup> In addition to being overcrowded, the vessels were usually infected with smallpox. Various other assorted fevers were also present and no attempt was made to segregate the ill from the well. The chances of surviving as a prisoner of war were very small.

The Continental Congress instituted the first organizational plan for the medical department, July 27, 1775. It provided for the establishment of "an hospital for an army of 20,000 men."<sup>8</sup> At that time the term "hospital" meant an organization, not a building. The plan provided for both general and regimental facilities. The regimental hospital under the direction of a regimental surgeon was a small mobile unit near the troops. The general hospitals were usually at a distance from the scene of conflict, but near the army. The following officers and attendants were authorized: A director general and chief physician, four surgeons, one apothecary, twenty surgeon's mates, one clerk, two storekeepers, and one nurse to every ten sick.<sup>9</sup> The director general was to receive \$4 per day, the surgeons \$1.33 per day, and the nurses \$2 per month.

Medical appointments were made generally in a haphazard manner and some applicants appear to have been selected only on the basis of their petitions for appointment. Colonels appointed the surgeons for their regiments and as a result many ignorant, uneducated surgeons were accepted for service. The exception was Massachusetts which maintained a high standard for the medical service by rigorous examinations. Doctor James Thacher described the Massachusetts' examination in his *Military Journal of the Revolutionary War*: "July, 1775. On the appointed day, the medical candidates, sixteen in number, were summoned before the board for examination. This business occupied about four hours: the subjects were anatomy, physiology, surgery, and medicine. It was not long after, that I was happily relieved from suspense by receiving the sanction and acceptance of the board . . . The



examination was in considerable degree close and severe, which occasioned not a little agitation in our ranks."<sup>10</sup> The quality of physicians in the service ranged from the uneducated to the most distinguished and best-educated of the time.

Doctor Benjamin Church, a well-known, respected, Boston physician, was appointed the first Director General and Chief Physician of the Hospital Department in July, 1775. A short time after assuming directorship, Doctor Church was accused of treason. In October 1775, he was tried by a general court-martial with General Washington presiding. Many respected citizens felt that the evidence did not establish his guilt, but his defense was weak and the court-martial found him guilty. Church served a year in prison and was released on the condition that he leave the country. He embarked with his family for the West Indies and was lost at sea. Doctor Thacher wrote his impression of this episode: "In the instance of Doctor Church there was not a few among the most respectable and intelligent of the community, who expressed strong doubts of a criminal design in his conduct. So high was party zeal, that a torrent of indignation was ever at hand to sweep from the land every guilty or suspected character."<sup>11</sup> The whole affair was a poor beginning for the new medical department.

Doctor John Morgan, one of the best-qualified of all colonial physicians and a founder of the medical school at Philadelphia, accepted congressional appointment to the vacancy left by Doctor Church. He inherited fully developed problems. Meager supplies, petty politics, and professional jealousies were constant sources of contention in the department. In September 1776, General Washington wrote Congress: "The regimental surgeons are aiming I am persuaded to break up the general hospital and have in numberless instances drawn for medicines, stores, etc., in the most profuse and extravagant manner for private purposes."<sup>12</sup> He recommended that the director general and the chief surgeons appoint the regimental surgeons. Jealousies and resentments between the hospital surgeons and the regimental surgeons continually undermined

Morgan's work. Two thousand bed frames made for general hospital use were pilfered by regimental surgeons.<sup>13</sup> Nevertheless, he put all his energy and ability into organizing and improving the medical department.

Doctor Morgan sent numerous petitions asking Congress to improve conditions and clarify authority. Medical affairs were under the control of a relatively unimportant congressional committee—one of a hundred committees. Its chairman, Samuel Adams, was a member of ninety of the committees and chairman of twenty-four. Consequently, attempts to accomplish change met with long delays.

The lack of clearly defined lines of authority was a major cause of friction among the physicians. One of Morgan's problems was Doctor William Stringer who thought himself to be an autonomous medical director of the Northern Department in upstate New York. Because his appointment superseded by thirty-one days the appointment of Morgan, he maintained that he was not subordinate to Doctor Morgan. Although Morgan tried to ameliorate the situation and shared his meager supplies with him, Stringer repeatedly refused his cooperation. It was impossible to have a unified command or to dispense medicine and supplies efficiently. In August 1776, Congress ruled that Doctor Morgan was appointed "Director General and Physician in Chief of the American Hospital," and that Doctor Stringer was appointed "Director of the Hospital in the Northern Department, only."<sup>14</sup> This, however, still did not give Morgan explicit authority over Stringer.

Discontent reigned among the regimental surgeons. When Congress authorized the Hospital Department it neglected to make provision for supplies for the regimental surgeons. Their supplies had to be taken from general hospital stores which resulted in endless friction between the hospital surgeons and the regimental surgeons. Doctor

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*Virginia R. Allen received her master's degree in history from Central State College, Edmond, Oklahoma in 1968. She is currently doing work toward a Ph.D. degree in American history and is working as a teaching assistant at Oklahoma State University.*



Morgan sent many requests and recommendations to Congress and suggested to the regimental surgeons that they do the same. Funds which were always a problem were at a low ebb at this time. Congress finally acted, but set up such an elaborate paper report system that the regimental surgeons were further irritated. They were also alienated by Congress' suggestion that regimental hospitals be eliminated except when specifically ordered. Although most of the problems and shortages were beyond the control of Doctor Morgan, accusations of neglect and mismanagement were fostered by Doctor Stringer and the regimental surgeons. Morgan believed that an old rival, Doctor William Shippen, Jr. of Philadelphia, also encouraged the charges. On January 9, 1777, Congress passed a resolution which dismissed both Morgan and Stringer. Had Congress taken time to investigate fully, it might have acted differently. Frequent complaints and protests pressured the overworked, tired Congressmen until they decided to eliminate what seemed to be two major sources of difficulty.

A plan for reorganization of the medical department was devised by Shippen and Doctor John Cochran and submitted to Congress. Congress gave approval to the plan which provided for a director general to preside over three geographical divisions, with each division headed by a deputy director general. The divisions and their directors were: the Eastern Department directed by Doctor Isaac Foster; the Middle Department directed by Doctor Benjamin Rush; and the Northern Department directed by Doctor Jonathan Potts.<sup>15</sup> Included in the plan, but not subordinate to the director general, was a Southern Department under the direction of Doctor William Rickman. On April 11, 1777, Congress appointed Shippen Director General. Doctor Shippen was also plagued by problems and shortages. Because he spent little time in the general hospitals or in the field, rumors of his neglect circulated. In March 1780, Shippen was charged with malpractice and misconduct and was court-martialed. The trial lasted for three months, but the evidence was inconclusive and Doctor Shippen was discharged from arrest in August, 1780. He accepted reappointment in October, but

served only three months before resigning.

In September 1780, Congress again reorganized the medical department. This plan authorized a director of hospitals who was to have charge of all the hospitals north of North Carolina. Under him were three chief hospital physicians, twenty surgeon's mates, one purveyor, and one apothecary. With each army unit in the field was a chief physician with regimental surgeons and surgeon's mates under him.<sup>16</sup> The new plan continued the Southern Department, but made it responsible to the hospital department under the director general.

Doctor John Cochran was appointed the new Director of Hospitals in January, 1781. In a letter to Congress, General Washington had stated previously his opinion of Doctor Cochran: "I would take the liberty of mentioning a gentleman whom I think highly deserving of notice, not only on account of his abilities, but for the very great assistance which he has afforded us in the course of this winter, merely in the nature of a volunteer. This gentleman is Doctor John Cochran, well known to all the faculty . . . and has distinguished himself this winter, particularly in his attention to the smallpox patients and the wounded."<sup>17</sup> Doctor Cochran was well-trained and had served as a surgeon's mate during the French and Indian War. His colleague, Doctor Thacher, said of Cochran: "In discharging the duties of his profession he bestowed that attention, and exercised that tenderness and humanity, which never fail to solace the feelings of the afflicted."<sup>18</sup> Doctor Cochran was beset by acute shortages and inflated currency as the other directors had been; however, he began his service harmoniously and served throughout the remainder of the war.

Throughout the periods of confusion and reorganization, when the medical department was without leadership and supplies, the real victims of the inadequacies of the medical department were the soldiers in the field. Washington expressed common sentiment in another letter to Congress: "I hope your new appointment . . . will make the necessary reform in the hospitals and that I shall not, in the next campaign have my ears and eyes shocked with the complaints and looks of the poor creatures perishing for want of proper care . . ."<sup>19</sup> □



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6520 N. Missouri, Oklahoma City, Oklahoma 73111

OSMA HOUSE OF DELEGATES RECOMMENDS  
CURRENT PROCEDURAL TERMINOLOGY—SECOND EDITION

During its May meeting the OSMA House of Delegates endorsed the newly issued second edition of the AMA's Current Procedural Terminology handbook. The house further recommended that all members of the OSMA be encouraged to convert to this official system of coding diagnostic and treatment procedures as rapidly as possible.

Copies of the second edition are now available for \$2.00 each from the American Medical Association, Circulation and Records Department, 535 North Dearborn Street, Chicago, Illinois 60610.

The major difference between the second edition and first edition of this handbook is in the number of digits in each code. The edition introduces a five digit coding system which allows for greater flexibility in procedure descriptions and allows for appropriate coding for medical services that will be developed in the future.

While stating that the new coding procedure was optional for members of the association, the House of Delegates did state that conversion to this new five digit system would generate better understanding among all parties involved in the delivery of and payment for health care.

Medical students, hospital interns and residents, may order the new book at a reduced price of only \$1.00. ☐



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live in Lawton, Enid,  
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\*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Lawton, Enid, Norman, and Muskogee is 206,500. (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...



# Injectable Garamycin<sup>®</sup> gentamicin sulfate injection

Schering

## ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

### Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	Less Severe 0.8-1.2 mg./kg. for 7-10 days	Resistant/ Moderately Severe Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	Serious/Life-Threatening
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		up to 5 mg./kg.

†Alkalinization of the urine may be a useful therapeutic adjunct.

### Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

### Clinical Considerations

**Indications:** GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa*, and species of indole-positive and indole-negative *Proteus*, *Escherichia coli*, and *Klebsiella-Aerobacter*. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

### IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by:				No. of <i>In Vitro</i> Studies
		4 mcg./cc. or less		8 mcg./cc. or less*		
<i>Staphylococcus aureus</i>	1,210	1,200	(99%)	1,206	(99%)	11
<i>Pseudomonas aeruginosa</i>	885	771	(87%)	828	(93%)	16
<i>Escherichia coli</i>	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative <i>Proteus</i> species	477	210	(44%)	358	(75%)	12
<i>Klebsiella-Aerobacter</i> species	292	205	(70%)	231	(79%)	10

\*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa*, 828 (93%); *Escherichia coli*, 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.

Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa*, *Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

**Contraindications:** GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

**Warnings:** Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

**Precautions:** In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

**Adverse Reactions:** The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

**Packaging:** GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.



# O.U. Medical Graduates— Where They Go

MARK ALLEN EVERETT, M.D.

*The practice location of medical graduates  
from 1958 through 1965 is analyzed.*

DATA ACCUMULATED for a recent study of medical school admission procedures included the 1969 place of residence of those who completed medical school between 1958 and 1965. Because of current interest in physician distribution in Oklahoma the following information is presented.

### DATA

Between 1958 and 1965, 712 persons received the M.D. degree from the University of Oklahoma. Their 1969 residences are presented in Table I. The locations of the 372 graduates who practice out of Oklahoma are listed in Table II.

### DISCUSSION

Slightly more than 50 percent of O.U. medical graduates (1958-65) are no longer in Oklahoma. (The loss of O.U. graduates to other states is more than balanced by doctors coming to Oklahoma from elsewhere. During the period 1958-65, 494 non-Oklahoma graduates were licensed to practice in Oklahoma.) Thirty-seven percent have practice locations outside of Oklahoma while 13 percent are in government service. Presumably some of this latter group will return

Table II OUT-OF-STATE O.U. MEDICAL GRADUATES	
West Coast and Northwest	57
Midwest-North Central-Northeast	49
Texas	47
Arkansas-Kansas-Missouri	39
Arizona-Colorado-New Mexico	31
South	28
Overseas	9
Total	260

to Oklahoma for practice although 18 percent of 1964-65 graduates are in government service and only ten percent of 1958-59 graduates. From Table I it may be seen that while the number of graduates who remain in Oklahoma has remained relatively stable throughout the period of this study, an increasing percentage of those who remain are located in Oklahoma City and Tulsa. This urban concentration may represent, in part, physicians in postgraduate training, but also probably reflects a tendency for physicians to remain in the cities. □

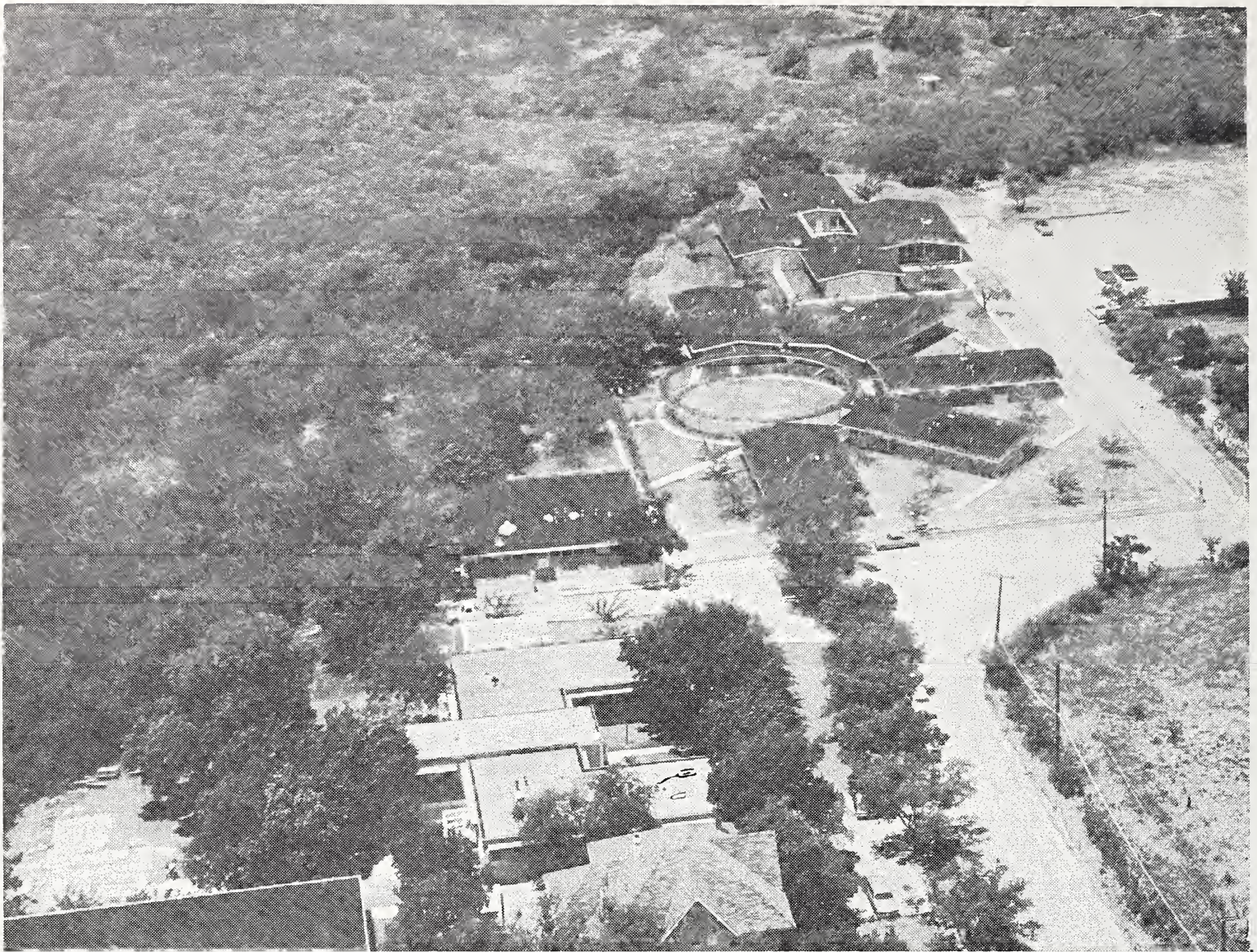
800 N.E. 13th Street, Oklahoma City, Oklahoma 73104

Mark Allen Everett, M.D., graduated from the University of Oklahoma School of Medicine in 1951, where he is presently Professor and Chairman of the Department of Dermatology. Doctor Everett is certified by the American Board of Dermatology and is a member of the American Academy of Dermatology, the Society of Tropical Dermatology, the Society of Investigative Dermatology, the American Venereal Disease Association, the American Dermatological Association and the Radiation Research Society.

Table I  
LOCATION OF O.U. MEDICAL GRADUATES (1969)

Year of Graduation	1958-59		1960-61		1962-63		1964-65		Total	
Location	#	%	#	%	#	%	#	%	#	%
Oklahoma City and Tulsa	37	21	44	26	70	38	60	32	211	30
Other Oklahoma	42	24	46	27	26	14	20	11	134	18
Out of State	72	42	56	33	66	36	66	35	260	37
U.S. Government Service	17	10	22	13	18	10	34	18	91	13
Other	5	3	2	1	2	1	7	4	16	2
Total	173		170		182		187		712	





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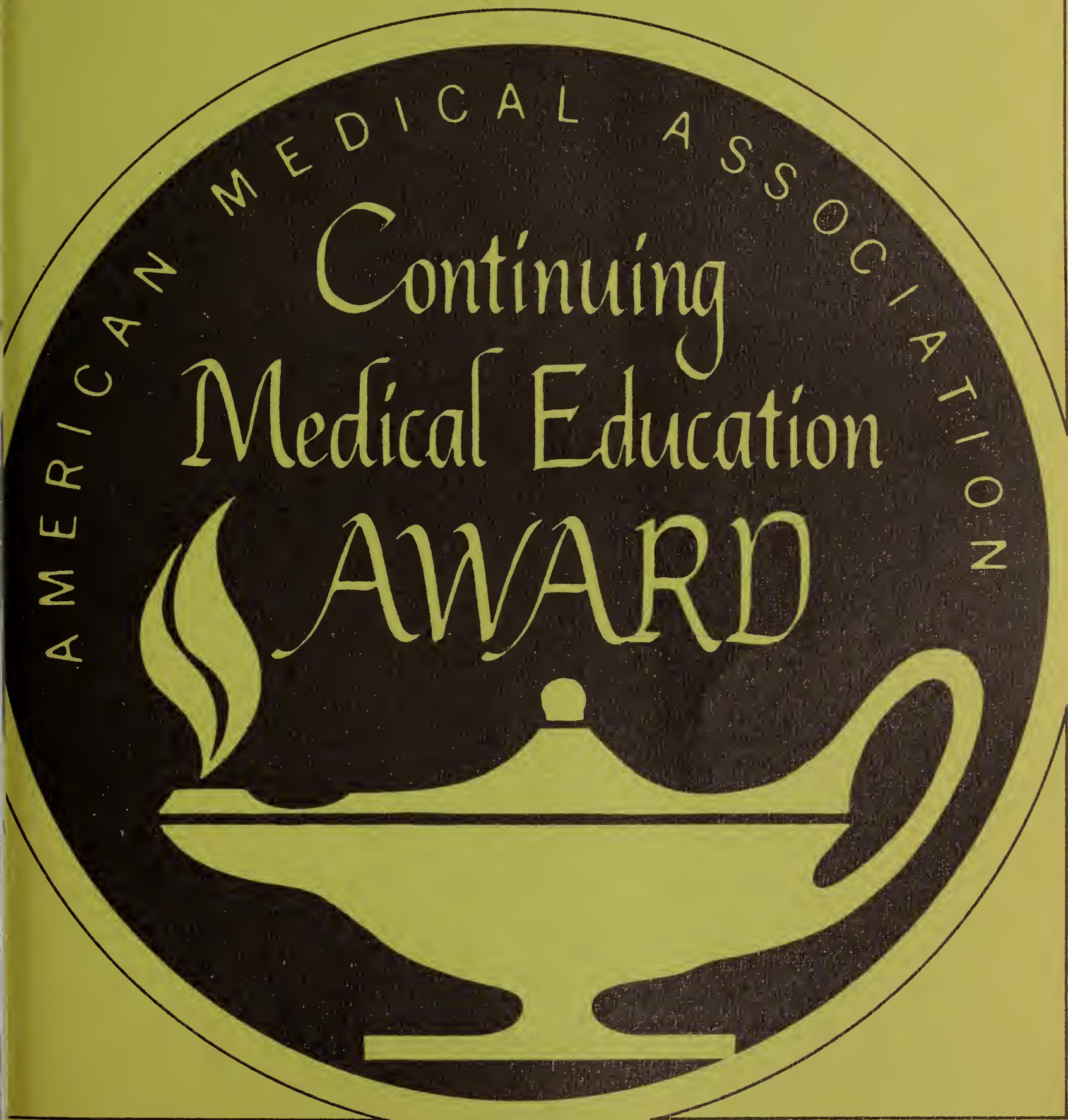
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# Continuing Education





# Physicians' Recognition Award Explained

**T**HE AMERICAN Medical Association at its Clinical Convention in December, 1968, established the Physician's Recognition Award Program for participation in continuing medical education.

OSMA's Council on Postgraduate Education recently endorsed the program and encourages all Oklahoma physicians to participate.

Following are the details for qualifying and achieving the award.

## APPLICATION

Application for the award is voluntary and open to all doctors of medicine in the United States without regard to citizenship or AMA membership.

An applicant with a medical degree from a foreign medical school may be considered if he is fully licensed to practice medicine in a state, or is certified by the Educational Council for Foreign Medical Graduates.

He may be in an internship or residency or pursuing a program for an advanced degree in the field of medicine or medically-related sciences, or doing medical research.

He may work in medical education, medical administration, or be a clinician in a specialty or general practice.

## THE AWARD CERTIFICATE

An Award Certificate will be issued after a three-year qualifying period during which specific requirements have been met. A physician may apply for the award at any time

and may use credits from approved courses he attended during the previous three years.

## REQUIREMENTS

Three years (one year is equivalent to 50 credit hours) of graduate training in an AMA approved internship or residency. Equivalent educational programs leading to an advanced degree other than the M.D. degree, or equivalent research activity in medicine or a medically related field may also be credited or:

One hundred and fifty credit hours, or more, of continuing education must be accumulated within the three-year qualifying period.

At least 60 hours must be in required education.

The remaining 90 credit hours may be selected from the elective education categories or:

A combination of credits from graduate medical education or research and continuing education totaling 150 credit hours, or more, is acceptable. At least 60 hours must be in required education.

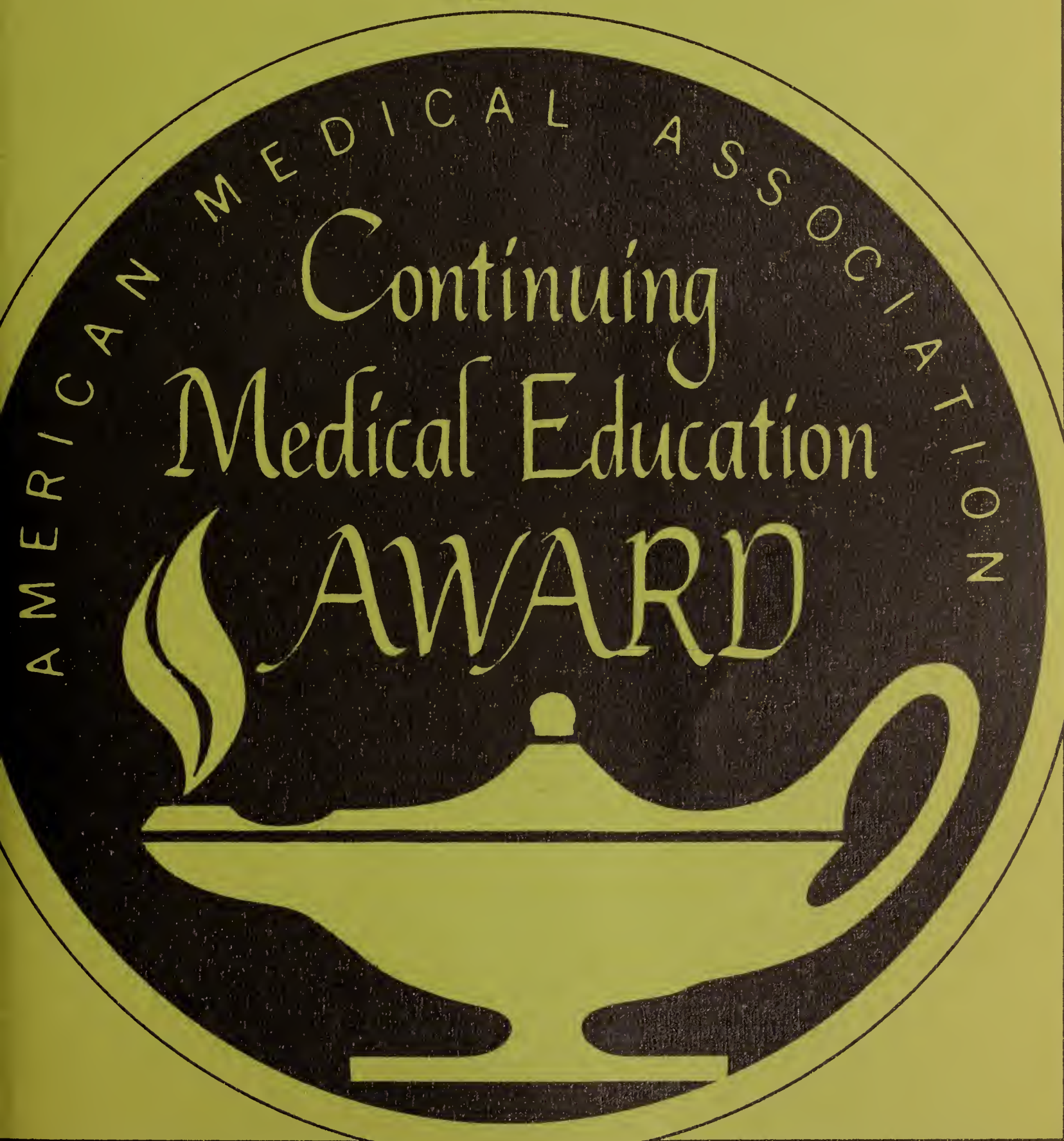
## SIX CATEGORIES ACCEPTABLE

### 1. AMA APPROVED GRADUATE EDUCATION

A physician who has completed at least *three continuous years* of an AMA approved internship or residency is eligible for the Award. The internship may be rotating or straight. Up to one month of time is allowed for vacation, illness, etc., so that 11 months is counted as a full year.



# Continuing Education





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A combination of credits from graduate medical education or research and continuing education totaling 150 credit hours, or more, is acceptable. At least 60 hours must be in required education.

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No credit can be given for unapproved internships or residencies.

## 2. EDUCATION LEADING TO AN ADVANCED DEGREE IN A MEDICAL FIELD

Education leading to an advanced degree in a medical field other than the M.D. degree may be used for credit. The degree should be in a medical field or medically-related sciences such as medical care administration, hospital administration, epidemiology, biostatistics, health education, etc.

## 3. MEDICAL RESEARCH

The research should be medically oriented or medically related to be acceptable for credit.

## 4. CONTINUING MEDICAL EDUCATION COURSES

*Most practicing physicians will use this category to obtain their 150 credit hours.*

Until all institutions have had an opportunity to be accredited, any courses offered by an institution listed in "Continuing Education Courses for Physicians," *Journal of the American Medical Association*, are creditable.

Credit hours are given on an hour-for-hour basis of course attendance.

There is no *limit* to the number of credit hours that can be accumulated toward the 150 credit hour Award requirement under Continuing Medical Education Courses.

## 5. TEACHING

One credit hour is allowed for each hour of contact teaching.

Credit hours are given for AMA accredited medical education programs including teaching in: Medical schools, approved intern or resident programs, and AMA approved continuing medical education programs.

Teaching of nurses, allied health personnel, and non-professional groups is not creditable.

This category of Required Education has a *30 credit hour limit*, but teaching activities in excess of 30 credit hours, up to a maximum of *60 additional credit hours* may be credited as Elective Education.

## 6. PAPERS OR PUBLICATIONS

Ten credit hours may be claimed for a scientific presentation or a publication. A paper must be presented to a medical society or a comparable professional group. A pub-

lication must appear in a recognized medical or scientific journal.

If the same material from either a presentation or a publication is presented repeatedly, or published in different journals, credit in addition to the original ten hours should not be claimed.

Papers or publications are creditable only if they are presented or published during the three-year qualifying period.

There is *no limit* to the number of credit hours that can be accumulated toward the 150 credit hour Award requirement under Papers and Publications.

## 7. SCIENTIFIC MEETINGS

Credit hours are given on an hour-for-hour basis covering the entire three-year qualifying period.

Scientific meetings acceptable for credit include those of hospital medical staffs and professional societies such as local medical societies.

There is a *50 credit hour limit* for this category.

## 8. AMA SCIENTIFIC ASSEMBLIES AND PROFESSIONAL SOCIETY SCIENTIFIC MEETINGS

Credit hours are given on an hour-for-hour basis covering the entire three-year qualifying period.

Meetings for which credit hours may be claimed include state, regional, or international medical societies and medically related societies of comparable size or geographic coverage.

There is a *fifty credit hour limit* for this category.

## 9. SCIENTIFIC EXHIBITS

Ten credit hours are allowed for preparing and personally presenting a scientific exhibit at a professional meeting of a medical society, or medically related professional society.

Credit cannot be given for exhibits shown only to a local medical society, to non-physician groups, or at a meeting of less than one day's duration.

Credit may be claimed for only the first showing which must be during the three-year qualifying period.

## 10. ADDITIONAL TEACHING

There is a *60 credit hour limit* for this category. The teaching that may be credited here is in addition to the 30 credit hour limit



## Award /

under Required Education.

### ADDING UP

A total of 150 credit hours is needed to be eligible for the Award Certificate.

The requirements may be met by 150 credit hours of Required Education, or any combination of Required and Elective Education as long as the 60 credit hour minimum for Required Education is met.

When filling out your credit record it is important that enough information be provided so an accurate review of your application can be made. Be sure to list the complete title of each activity, as well as its location and inclusive dates.

Applications may be submitted for review by mailing an application blank and the application fee of \$5.00 to the

Department of Continuing Medical  
Education

American Medical Association

535 North Dearborn Street

Chicago, Illinois 60610.

Your remittance should be made payable to the American Medical Association. No fee is charged for interns or residents.

Please allow a reasonable time for the review and validation of your application and the issuance of the certificate. □

## AMA Accepts OSMA Education Resolution

**A**N OKLAHOMA resolution regarding postgraduate education programs was accepted by the AMA House of Delegates during its June meeting in Chicago. The resolution, sponsored by the OSMA House of Delegates, called for cooperation between the AMA and the American Academy of General Practice in coordinating postgraduate programs.

At the present time the AMA's Department of Continuing Education accepts AAGP postgraduate courses and they may be used by a physician to qualify for the Physician's Recognition Award. However, the AMA will not accept the AAGP recertification of members as sufficient. They require each individual physician to send a copy of his record of AAGP postgraduate hours.

This latter requirement placed an administrative burden on the AAGP national

headquarters. The purpose of the OSMA resolution was to ask the AMA to accept the recertification as sufficient evidence of postgraduate education to comply with the requirements for the Physician's Recognition Award. This was to alleviate the AAGP's administrative problems.

Oklahoma's resolution urged, "the American Medical Association to take the initiative to establish liaison with the American Academy of General Practice to develop appropriate procedures to coordinate the work of the two associations in an equitable manner which will relieve the administrative problems of the AAGP and its affiliates." It further stated that the AAGP and its various state affiliates desired that their policy to recertify members on the basis of meeting education requirements should be accepted by the AMA without the burden of providing each member with a record of his postgraduate hours. □

## Continuing Education Program Approved

**C**ONTINUING medical education programs conducted by the University of Oklahoma Medical Center have been granted full approval by the Council on Medical Education of the American Medical Association. This means the OU Medical Center will be designated as an accredited institution by the AMA.

Announcement of the accreditation was made by letter to Erwin H. Brown, M.D., Director of Postgraduate Education at the medical center, from C. H. William Ruhe, M.D., Director of the AMA's Department of Continuing Medical Education.

In his letter Doctor Ruhe stated, "We are pleased to inform you that . . . the continuing education program of the University of Oklahoma Medical Center has been granted full approval by the Council on Medical Education." He went on to state that courses offered by the OU Medical Center will now be listed in the *Journal of the American Medical Association*.

Upcoming courses include the following: Allergic Diseases—Newer Concepts in Management, September 17th; Infections—Skills and Knowledge of Use to the Surgeon, Part I, October 8th; and Part II of Infections, November 12th. □



## Need Information? Contact the Regional Library Program

**I**NCREASINGLY, the quality of medical care depends on the capacity of the physician to promptly retrieve information applicable to the solution of clinical problems. The doctor usually has too many patients and too little time. He knows more than ever before, but there is an increasing gap between what any individual physician can know and the sum of all medical knowledge potentially applicable in his practice.

The purpose of the Library and Information Project of the Oklahoma Regional Medical Program is to promote continuing education and better health care by providing information services that are more relevant, more effective, more prompt and more accessible. Several approaches are being used. Efforts are being made to improve the resources and services of libraries in community hospitals. Medical records librarians and secretaries are being trained to develop local libraries and information services and to retrieve information from other sources including larger libraries in this and other regions.

In cases where the information is not available locally, it is now usually readily available from the regional librarian based at the University of Oklahoma Medical Center Library. The regional librarian has available the 70,000 volume collection and services of the medical center library as well as a full array of national resources including the services of the National Library of Medicine and its Regional Libraries. The cooperating libraries now constitute a regional system that will usually be able to respond to requests for specific articles either immediately or within one day. In most instances it will be possible to provide photocopies which will not need to be returned. Requests can be called in day or night seven days per week (Oklahoma City 232-5656). In addition to providing specified books and journal articles, the regional librarian and her consultants can answer reference questions such as, "Can you provide a recent summary on the diagnosis and management of bleeding disorders?" or "Would it be possible to obtain two or three recent authoritative articles on the treatment of cancer of

the prostate?" The staff and consultants of the Regional Library Project are also available to hospitals to assist in the development of local library and information services. This would include advice on which books, journals, and reference tools to purchase when the budget is quite limited; and how to start, maintain, and use a small collection.

Physicians in Northwest Oklahoma may find it more convenient to contact this system of cooperating institutions through the librarian at St. Mary's Hospital in Enid (AD 7-0141), and those in the Tulsa area can contact the library of the Tulsa County Medical Society (LU 7-1461). Again, the telephone number of the regional librarian at the University Medical Center is 232-5656 (801 N.E. 13th, 73104). Hospital librarians in Oklahoma know these addresses and numbers, but you might want to have your secretary note them. *Kelly M. West, M.D.* □

## Council On Postgraduate Education Takes New Approach

**"W**E SHOULD coordinate, innovate, motivate and make certain adequate postgraduate pursuits are available to our members but we can't be a prime supplier of medical education" reports Robert J. Hogue, M.D., Chairman, OSMA Council on Postgraduate Education.

This essentially sums up the feelings of OSMA Council on Postgraduate Education. After a lengthy meeting several weeks ago, council members agreed that the association has neither the personnel nor the funds to adequately conduct the wide range of courses necessary for Oklahoma doctors to "keep up."

"That doesn't mean we're out of the education business," reports Doctor Hogue. "Quite the contrary, we've concentrated on providing a few physicians with a few courses, what we intend to do now is use our resources to encourage our membership to attend continuing education programs. We'll work closely with the Medical School, Regional Medical Program and others to make certain that the proper courses are available and we'll keep our members informed of regional activities. We think we'll get more mileage out of our dollars with this approach and we know we'll be reaching more of our members." □



# Continuing Medical Education in Oklahoma

DALE GROOM, M.D.\*

THIS MONTH, for the first time in its long history, *The Journal* is dedicating an issue to the general subject of continuing education. To point out that this is in keeping with our times is superfluous because such occurrences result from real needs and trends. In fact, medical journals themselves arose as instruments of continuing education and that remains their major justification for existence. But what trends in our profession conspire to bring this so to the fore in the last half of the twentieth century (for the term "continuing education" was virtually unknown in the first half)? What is the responsibility of organized medicine in this growing field of professional endeavor? Of academic medicine? And how does it bear on the practicing physician?

## BY WAY OF BACKGROUND

A conspicuous trend, and one which makes continuing education essential for truly modern standards of health care, is the increasing development and complexity of the scientific basis of medicine. The unprecedented investment in research over the last three decades is paying off. We hear statements that "the half-life of medical knowledge is only six years," that "most of the medical researchers who have ever lived are now alive" and that the rate of their scientific progress is such that an inordinate time lag results between the acquisition of new knowledge and its application in patient care. Certainly medical education, research and practice have undergone major changes in the last few decades—changes that have

brought mounting pressures focused on questions of specialization, group practice, on the basic philosophy of the entire health care system.

All physicians over forty have first-hand acquaintance with this scientific revolution in our field, comparable in historical significance to the industrial revolution of earlier days in America. Medicine has progressed in our own lifetime from a largely descriptive approach to disease, in which the practitioner had little to dispense other than himself, to a vastly more dynamic and definitive one which inevitably is far more complex. Until recent years medical students, having been duly filled like urns with measured quotas of distilled knowledge, customarily were exhorted at commencement time to go forth applying that knowledge in a life of service to their fellow man. Now, however, the accent is clearly on a lifetime of learning. The new order is caricatured by the candid dean who is reputed to have told his graduating class that "you will find out in practice that half of what we have taught you in medical school is wrong—only trouble is, we don't know which half." So, though we may at times look longingly at fields like anatomy and philosophy where the tenets are more comfortably secure and the pace more leisurely, we in clinical medicine must strive constantly to keep abreast of an accelerating tempo of change if we are to keep our professional heads above water.

Justifying continuing education is a little like defending the virtues of integrity and honor, but there is one function which it serves that we need occasionally to be reminded of: It provides a certain intellectual ballast. Particularly in a relatively isolated, solo practice situation, one can almost imperceptibly lose one's perspective and balanced view of concepts in diagnosis or treatment, become misled on the basis of frag-

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Dr. Groom, who directs Oklahoma's Regional Medical Program, serves on the AMA's Committee on Continuing Medical Education and its Council on Scientific Assembly. He also is a member of the committee of the American College of Physicians which produced their "Self-Assessment Program," and of the Postgraduate Education Committee of the American College of Cardiology.



mentary evidence, limited experience or biased information. So many proprietary and other commercial pressures are arrayed against the practicing physician (now that our health care system has become a 60 billion dollar a year industry with a federal budget second only to that for national defense) that just keeping one's bearings in the deluge of information and misinformation can become a never-ending struggle. Communication with one's colleagues—and especially with *peers*—is the best possible antidote against getting “hung up” in areas of professional judgment. The recent popularity of the *core curriculum* approach observed in convention and postgraduate programs is indicative of a realization of need of such scientific ballast.

In all this the public is coming to play an increasing role, also. Communication and public education are such that the average citizen is far more sophisticated in things medical than he used to be. He may not yet know the distinction between an internist and an interne but he is well aware of medical needs of individuals and of society. He has an often surprising knowledge of the latest medical and surgical measures to meet those needs. He loudly proclaims that good medical care is for all people a right, not a privilege. In the public mind physicians have lost their traditional halo of omnipotence and infallibility. We are even being unjustly held responsible for social and economic ills of our society far beyond the purview of a medical man. The upshot is that scrutiny has replaced naivety in the public's attitude toward a profession which once was regarded as quite aloof from critical appraisal. For it is true that the man in the street, the taxpayer, rather than the philanthropist, is now the real patron of medical education. He knows it and he is looking over our shoulder asking probing questions of standards, of selection of candidates for our medical schools, of methods of education and licensure, of public responsibility. Specifically he is asking where is our *quality control* in practice. Legislators, too, are more knowledgeable of our affairs and they rightfully are coming to regard health as a prime national resource, in the category of public domain. Understandably they are sensitive

to public mutterings of relicensure and recertification, as we are.

Organized medicine has perhaps too long been preoccupied with “holding the line” against these changes which we see all about us. We are justly proud of our honorable heritage, of our human as well as scientific attributes, of our position of world renown. But for today's problems yesterday's answers just aren't enough, any more than is yesterday's pharmacopoeia. We have the clear choice of charting our own professional destiny or being subject to external pressures, some of them distinctly unsympathetic with the privileged way of life to which we are accustomed. Maybe, as we hear, “medical care for our people is too important an issue to be left entirely to doctors.” Whether we are or are not able to chart the course, we must admit that the public image of organized medicine in America has done little to disprove that.

It was on this note, the need for built-in quality control in the practice of medicine and the preference for positive inducement and motivation instead of coercion that the American Medical Association introduced several months ago the *Physician's Recognition Award*. A simple certificate of achievement, renewable every three years, it is given to members or non-members of AMA who provide evidence of meeting specific criteria of participation in continuing education. Details of these criteria are set forth elsewhere in this issue of *The Journal*. True, it is not a final arbiter of who is and who is not up-to-date in his methods of practice (for some students can and do manage to remain mentally inert while sitting in classrooms by the hour, assimilating little more than oxygen) but it does constitute a step in the right direction. The fact remains that we still do not have an adequate means of assessing on a national scale the actual performance of clinicians.

Medical schools of this country, presently staggering under unprecedented demands on their resources on one hand and sweeping cuts in federal support on the other, are for the most part unable to do all that they know needs to be done in continuing education. The academic facts of life are such that undergraduate and residency education must command a higher priority. Yet the only



way to raise quickly the standards of medical practice throughout an entire region is through continuing education of those already in practice, and certainly a state-supported medical school, more than a privately endowed institution, has an acknowledged responsibility in that arena.

The University of Oklahoma annually puts on a variety of postgraduate courses, both at the Medical Center and in strategic locations throughout the state, many of them in cooperation with the universities of neighboring states. Medical television programs, some produced in Oklahoma and others selected from the libraries of other centers, are broadcast twice each Tuesday in cooperation with the Oklahoma State Medical Association (over the educational channels 13, KETA-TV, Oklahoma City, and 11, KOED-TV, Tulsa), with the aim of bringing presentations of academic quality to physicians not only in their home communities but in their homes, and on a regular and truly continuing basis. In-residence refresher courses extending over weeks or months are arranged on an individual basis with specific departments, notably psychiatry. Numerous guest lectures, "grand rounds," journal clubs and clinical conferences are scheduled throughout the school year, both in Oklahoma City and Tulsa, announced through various channels to the medical community. A roster of faculty speakers with suggested topics is published elsewhere in this issue of *The Journal* for the programming of county medical societies and other professional meetings. The Oklahoma Regional Medical Program has, in its less than a year and a half of operation, made formidable contributions to continuing education of physicians, nurses, dietitians and laboratory personnel through several projects serving virtually all areas of the State. One of these projects is devoted exclusively to education, bringing weekly case discussion conferences to hospitals in a multi-county area linked by a telephone network centered on Enid, while others in the fields of coronary care, nutrition and diabetes, emphysema, cancer and library services have been built largely around educational objectives. The trend to community hospital-based programs is evident with ap-

pointments of full-time Directors of Medical Education in several leading hospitals of Oklahoma. Still our aspirations exceed considerably our accomplishments; much remains to be done if we are to do justice to the needs now evident in a comparatively rural state with one of the lowest physician-to-population ratios in the nation.

### SO WHAT?

How then are we to work together to further develop continuing education in this era of transition? What are its major needs and where are the frontiers?

First, there exists now no dearth of opportunities. We are by no means operating in an educational vacuum. Furthermore, medical practice is changing—one need look back only a half-dozen years to see how rapidly. Not all, but surely most of the change is in a positive direction and constitutes progress. I am sure that some physicians in relatively isolated situations do an excellent job of keeping up simply by reading journals and by studious clinical observation. For most of us, however, a more formal type of learning experience is desirable, a more balanced academic diet with the stimulus of interpersonal exchange. Educators are perhaps too prone at times to look to a single method such as didactic courses or journals or television as *the* answer, rather than to a variety of methods for a variety of needs. On the other hand, there undoubtedly does exist a small segment of the profession (variously estimated in Great Britain and the United States to be as high as 10 to 15 percent) who are never seen or heard from in connection with medical conventions, courses or scientific programs of any kind. Presumably some of them acquire along the way a thick shell of indifference or an allergy to education so that they would not cross the street to hear William Osler himself. We need to know more about that minority.

Continuing education may have come a long way during the last two decades yet it still is a not entirely respectable "country cousin" in some academic circles. Not only will it have to rate a higher priority in the annual budget scramble but also in faculty appointments and promotions. Unlike lecturing in a medical school with its captive



classroom audiences, the business of attracting and holding a group of practitioners in a teaching situation entails competition—competition for the time of the busiest sector of our population. Unless we ply them with educational fare that is practical and pertinent to clinical problems, dispensed by the most able teachers, we can expect no more than perfunctory attention.

As to costs, surely physicians can and should pay for much of their postgraduate education. With the exception of a few financially successful postgraduate courses, however, and an occasionally profitable venture such as the recent self-assessment examination of the American College of Physicians, most institutional budgets for continuing education end up in red ink. For growth these programs require a firm basis of subsidy as do those of the undergraduate years. This, too, is in the realm of public domain. Support of postgraduate education is now shared at many levels with voluntary health agencies, the pharmaceutical industry and foundations, as well as state and federal government, but its control and direction must remain with our profession.

On the other side of the fence, there must be a new awakening among many practitioners of the dynamic nature of medical knowledge. In the traditional medical education there was a tendency to imply a certain static connotation, a sense of having at last "arrived" in our understanding of a disease process, so that students often came to graduation feeling that they "had it made" with their professional wares tied up in neat packages. When one considers the highly competitive feat of memorization inherent in such an education it is rather remarkable that there could be left after graduation any vestiges of intellectual curiosity, scientific or otherwise. Yet the doctor who does not maintain a flexibility and avidity in updating his scientific concepts is analogous to the manufacturer who fails to plow back some of the proceeds from his production into research for new and better products.

Just how we can better provide time for continuing education in the busy schedule of the average practitioner has been the subject of many proposals. The "sabbatical year" of leave to return to the medical center is, I think, impractical for most of us in

view of the multiplicity of demands of middle life, personal as well as professional. Like weight reduction, learning should not be sporadic but a life-long and continuing endeavor. Taking educational opportunities to the doctor in his home community is surely part of the answer, though it can become an extravagant expenditure of faculty time unless supplemented with more expedient methods of communication such as television, extension of library services, network telephone conferences, audio tapes and the like. (The latter, incidentally, is the only means yet devised for utilizing to educational advantage time otherwise lost in driving one's car on daily rounds.) Another answer lies in group practice which affords generally greater opportunities for individual respite from routine chores. I suspect that, ultimately, much of the solution will have to come from more efficient utilization of the physician's time. Studies which have been done of doctors' practices have disclosed appallingly high proportions of "wasted motion" performing chores which could better be relegated to helpers. So far as the physician is concerned, one of the greatest benefits of the growth of the *team* approach to practice (and especially the introduction of that new member of the team, the Physician Assistant) is that he can be freed of many time-consuming duties to invest his time more productively.

Finally, no commentary on this subject would be complete without paying tribute to Oklahoma's leadership in the use of television broadcasting for continuing education. Nearly ten years ago when it was almost unprecedented to present on open channels medical material at a professional level, the University Medical Center's Office of Postgraduate Education began experimenting with TV broadcasting in cooperation with the Oklahoma Educational Television Authority, and this has culminated in the present program "Always on Tuesday." As an educational medium, television is both costly and demanding, but it affords vast coverage and versatility. Already on its horizons are home recording units, EVR (Electronic Video Recording) and satellite transmission, all of which will multiply many-fold its educational potential. Now Oklahoma is on the threshold of a much



## Education / GROOM

more extensive television system, scheduled for operation in 1971, linking four points of origin (OU, OSU, the University of Oklahoma Medical Center and Tulsa University) with specially equipped TV classrooms in major industries throughout the State. While it will be a closed-circuit system designed primarily to serve the particular needs of industry, and perhaps not ideally suited for medical continuing education, it will afford a ready-made means of transmission (and talk-back) day and night between many communities of Oklahoma. Thus hospitals can connect into the network for private viewing of programs which are already in the planning stage, including conferences,

rounds, guest lectures and instruction at both undergraduate and postgraduate levels.

We in medicine have led many areas of the education industry in pioneering and acceptance of these newer media of communication. True, we still have much to learn about how to use them most effectively. But we are learning, for these tools are here to stay and they are as educationally respectable as we choose to make them. Our position today is a little like that of cartoonist Schultz' character, Charlie Brown, who, in a characteristically pensive moment, mused "there's no burden like a great potential." We in Oklahoma have that burden, and along with it the opportunities as well as the needs for leadership in continuing medical education. □

## Postgraduate Courses for Oklahoma and Surrounding States

As a part of its program to emphasize continuing education programs, OSMA's Council on Professional Education prepared the following list of courses. These are programs that will be conducted in Oklahoma and our neighboring states.

The accreditation of each course is not indicated. A physician interested in attending for credits toward the Physician Recognition Award should contact the sponsoring agency regarding the accreditation.

The August 3rd issue of the *Journal of the American Medical Association* (Volume 213, #5) has a complete listing of courses nationwide.

### OKLAHOMA:

**September 17, 1970**

Allergic Diseases—Newer Concepts and Management, Office of Postgraduate Education, University of Oklahoma Medical School, Site, Faculty House, 601 Northeast 14th, Oklahoma City, Oklahoma—4 hours

**September 17, 1970**

Psychiatry for Physicians, University of Oklahoma School of Medicine, Department of Psychiatry, 800 Northeast 13th, Okla-

homa City, Oklahoma—7 hours/day, 1 day/week for 33 weeks

**September 18, 1970**

Samuel Goodman Symposium, St. Johns Hospital, 1923 South Utica, Tulsa, Oklahoma—2 days

**October 8, 1970**

Infections—Skills and Knowledge of Use to the Surgeon, Part I, Office of Postgraduate Education, University of Oklahoma Medical School, Oklahoma City, Oklahoma

**October 26, 1970**

40th Annual Fall Conference, Oklahoma City Clinical Society, 601 Northwest Expressway, Oklahoma City, Oklahoma, Site, Hotel Oklahoma, Oklahoma City, Oklahoma—3 days

**November 8, 1970**

Fall Meeting of Oklahoma Society of Anesthesiology, Sign of the Ram Restaurant, Will Rogers World Airport, Oklahoma City, Oklahoma—1 day

**November 12, 1970**

Problems in the Diabetic Patient, Oklahoma Regional Medical Program, Northwest Okla-



homa Project, St. Mary's Hospital, Enid, Oklahoma—8 hours

**November 12, 1970**

Infections—Skills and Knowledge of Use to the Surgeon, Part II, Office of Postgraduate Education, University of Oklahoma Medical School, Faculty House, 601 Northeast 14th, Oklahoma City, Oklahoma—4 hours

**December 10, 1970**

Management of Common Diseases of the Ear, Office of Postgraduate Education, University of Oklahoma Medical School, Site, Faculty House, 601 Northeast 14th, Oklahoma City, Oklahoma—4 hours

**January 29, 1971**

Peripheral Vascular Disease—Oklahoma Regional Medical Program, Northwest Oklahoma Project, St. Mary's Hospital, Enid, Oklahoma—8 hours

**February 25, 1971**

Hearing Disorders in Children, University of Oklahoma Medical School, 800 Northeast 13th, Oklahoma City, Oklahoma—2 days

**March 1, 1971**

Advanced Electrocardiography, University of Oklahoma Medical School, 800 Northeast 13th, Oklahoma City, Oklahoma—5 days

**March 11, 1971**

Management of Acute Myocardial Infarction, Office of Postgraduate Education, University of Oklahoma School of Medicine, Faculty House, 601 Northeast 14th, Oklahoma City, Oklahoma—4 hours

**March 17, 1971**

Management of Patient With Renal Failure, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—2 days

**March 17, 1971**

Diseases of the Liver, Oklahoma Regional Medical Program, Northwest Project, St. Mary's Hospital, Enid, Oklahoma—8 hours

**March 18, 1971**

Annual Spring Meeting and Postgraduate Course, Ophthalmology and Otolaryngology, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—2 days

**March 22, 1971**

Oklahoma Physician Postgraduate Course and Spring Retreat, Office of Postgraduate Education, University of Oklahoma School

of Medicine, Padre Island, Port Isabel, Texas—5 days

**April 12, 1971**

Clinical Anesthesia: A Review Course in Practical and Safe Methods, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—5 days

**April 15, 1971**

Acute Pulmonary Emergencies, Causes and Treatment, Office of Postgraduate Education, University of Oklahoma School of Medicine, Faculty House, 601 Northeast 14th, Oklahoma City, Oklahoma—4 hours

**April 29, 1971**

65th Oklahoma State Medical Association Annual Meeting, Mayo Hotel, Tulsa, Oklahoma—3 days

**May 6, 1971**

Chemotherapy of Cancer, Oklahoma Regional Medical Program, Northwest Oklahoma Project, St. Mary's Hospital, Enid, Oklahoma

**May 12, 1971**

Infectious Diseases and Immunology, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—3 days

**May 13, 1971**

Annual Spring Symposia in Gynecology and Obstetrics, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—3 days

**May 15, 1971**

Breast Diseases, Benign and Malignant, University of Oklahoma School of Medicine, 800 Northeast 13th, Oklahoma City, Oklahoma—2 days

**May 17, 1971**

Otorhinolaryngology for Practicing Physicians—(A production of Colorado, Kansas, Missouri, Nebraska and Oklahoma Medical Schools, Site to be announced)—3 days

**May 21, 1971**

Annual Meeting, Oklahoma Association of House Staff Physicians, University of Oklahoma Medical School, 800 Northeast 13th, Oklahoma City, Oklahoma—8 hours

**ARKANSAS:**

**September 14, 1970**

Coronary Care Postgraduate Training Program for Practicing Physicians, University of Arkansas Medical Center, 4301 West Markham, Little Rock 72201—4 days



## *Postgraduate Courses*

### **September, 1970**

Postgraduate Seminar—Advanced, University of Arkansas Medical Center, 4301 West Markham, Little Rock 72201—7 months

### **September, 1970**

Postgraduate Psychiatric Seminar—Basic, University of Arkansas Medical Center, 4301 West Markham, Little Rock 72201—7 months

### **September, 1970**

Postgraduate Psychiatric Seminar—Regional, University of Arkansas Medical Center, 4301 West Markham, Little Rock 72201—8 months

## **COLORADO:**

### **December 2, 1970 and fall plus summer of 1971**

Clinical Management and Control of Tuberculosis, National Jewish Hospital, 3800 East Colfax Avenue, Denver 80206—11 days

### **September 14, 1970**

23rd Annual Symposium on Pulmonary Disease, Fitzsimons General Hospital, Denver 80240—4 days, 36 hours instruction

### **September 28, 1970**

Hospital Medical Staff Conference, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: YMCA Conference Center, Estes Park 80511—5 days, 40 hours instruction

### **September 30, 1970**

Orthopedic Postgraduate Day, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—11 months, 36 hours instruction

### **October 2, 1970**

Pediatric Postgraduate Day, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—7 months, 24 hours instruction

### **October 5, 1970, February 8, 1971**

High-Risk Infant Care, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—4 days, 4 days, 40 hours instruction

### **October 9, 1970**

Internal Medicine Postgraduate Day, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—7 months, 24 hours instruction

### **October 12, 1970**

Oral Cancer Seminar, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—8 hours instruction

### **October 21, 1970**

17th Western Cardiac Conference, Colorado Heart Association, 1375 Delaware Street, Denver 80204, Colorado Department of Public Health; Colorado-Wyoming RMP, At: Denison Auditorium, University of Colorado Medical Center—2 days, 24 hours instruction

### **October 26, 1970**

The Medical Audit and Continuing Education, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—3 days, 32 hours instruction

### **November 4, 1970**

Management and Care of Respiratory Insufficiency, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—2 days, 24 hours instruction

### **November 7, 1970**

Annual Clinic Days, St. Joseph Hospital, 1835 Franklin, Denver 80010—8 hours instruction

### **November 19, 1970**

Battered Child Symposium, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—2 days, 24 hours instruction

### **January 10, 1971**

Long-Term Prognosis Following Valve and Heart Replacement, American College of Cardiology, 9650 Rockville Pike, Bethesda, Maryland 20014, University of Colorado Medical Center, Colorado Heart Association, At: Snowmass-at-Aspen, Aspen—2 days, 12 hours instruction

### **January 17, 1971**

Annual Colorado Academy of General Practice Symposium, University of Colorado School of Medicine, Office of Postgraduate



Medical Education, 4200 East 9th Avenue, Denver 80220, Colorado Academy of General Practice, At: Cosmopolitan Hotel, Denver 80202—1 day

**January 18, 1971, February 1, 1971, June 21, 1971**

17th Annual General Practice Review, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: YMCA Conference Center, Estes Park 80511—5 days, 5 days, 5 days, 42 hours instruction

**January 18, 1971**

17th Annual General Practice Review, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—5 days, 42 hours instruction

**January 29, 1971**

Four Corners Medical Clinics, Montelores Medical Society, P.O. Drawer N, Cortez 81321, At: Stoner Alpine Lodge, Stoner—2 days, 6 hours instruction

**February 1, 1971**

Skiing Injuries, American Academy of Orthopaedic Surgeons, 430 North Michigan Avenue, Chicago 60611, At: Snowmass-At-Aspen, Aspen—3 days, 24 hours instruction

**February 1, 1971 and June 21, 1971**

17th Annual General Practice Review, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—5 days, 5 days, 42 hours instruction

**February 16, 1971**

Surgery of the Hand, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—4 days

**March 8, 1971**

Diagnostic Ultrasound, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—3 days, 24 hours instruction

**March 29, 1971**

Surgical Anatomy, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—3 months, 150 hours instruction

**April 14, 1971**

Management and Care of Respiratory, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220—3 days, 24 hours instruction

**April 29, 1971**

Clinical Dermatology, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, 3 days, 24 hours instruction

**July 5, 1971**

Ophthalmology, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: Broadmoor Hotel, Colorado Springs 80906—4 days, 16 hours instruction

**July 18, 1971**

Pediatrics, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: Aspen—4 days, 20 hours instruction

**July 26, 1971**

Internal Medicine, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: YMCA Conference Center, Estes Park 80511—5 days, 35 hours instruction

**July 27, 1971**

Pediatric Allergy, American Academy of Pediatrics, 1801 Hinman Avenue, Evanston, Illinois 60204, At: National Jewish Hospital and Research Center, Denver—3 days, 24 hours instruction

**August, 1971**

Dermatology, University of Colorado School of Medicine, Office of Postgraduate Medical Education, 4200 East 9th Avenue, Denver 80220, At: Rocky Mountain Dermatological Society, Aspen—3 days, 15 hours instruction

**KANSAS:**

**December 17, 1970**

Hematology—Advanced Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—15 days, 15 hours instruction



## *Postgraduate Courses*

**September 15, 1970**

General Medicine and Surgery, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 hours/day, 1 day/ month for 9 months

**September 15, 1970**

Clinical Traineeship in Cardiology, University of Kansas Medical Center, 39th and Rainbow Boulevard, Kansas City 66103—9 months

**September 21, 1970 and December 30, 1970**

Radiographic Studies of the Pediatric Chest, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—6 months, 15 hours instruction, 13 days

**October 1, 1970**

School Health: Legal Ramifications of Schools and Personnel, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 days, 12 hours instruction

**October 20, 1970**

Medicine and Religion: Youth Problems, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 days, 12 hours instruction

**October 22, 1970**

Neurological Problems, University of Kansas Medical Center, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 days, 6 hours instruction

**November 9, 1970**

Internal Medicine, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—4 days, 24 hours instruction

**December 1, 1970; January 5, 1971; February 2, 1971; March 2, 1971; March 30, 1971 and April 20, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Concordia—6 months, 30 hours instruction

**December 2, 1970; January 6, 1971; February 3, 1971; March 3, 1971; March 31, 1971 and April 21, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Hutchinson—6 months, 30 hours instruction

**December 2, 1970; January 7, 1971; February 3, 1971; March 3, 1971; March 31, 1971 and April 21, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Colby—6 months, 30 hours instruction

**December 3, 1970; January 7, 1971, February 3, 1971; March 4, 1971; April 1, 1971 and April 22, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Garden City—6 months, 30 hours instruction

**December 3, 1970; January 7, 1971; February 4, 1971; March 4, 1971; April 1, 1971; April 22, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Arkansas City—6 months, 30 hours instruction

**December 4, 1970; January 8, 1971; February 5, 1971; March 5, 1971; April 2, 1971; April 23, 1971**

Kansas Circuit Course, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Great Bend—6 months, 30 hours instruction

**December 4, 1970; January 8, 1971; February 5, 1971; March 5, 1971; April 2, 1971; April 23, 1971**

University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At: Emporia—6 months, 30 hours instruction

**December 16, 1970 and May 5, 1971**

Neurological Problems, University of Kansas Medical Center, Department of Postgraduate Medical Education, 39th and Rainbow



Boulevard, Kansas City 66103, At: Dodge City—2 days, 6 hours instruction

**December 17, 1970 and May 6, 1971**

Neurological Problems, University of Kansas Medical Center, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103, At Salina—2 days, 6 hours instruction

**February 8, 1971**

Cardiac Auscultation, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 days, 12 hours instruction

**February 24, 1971**

The Mentally Handicapped Child, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—1 day

**April 5, 1971**

Ophthalmology: Recent Advances in Medical and Neuro-ophthalmology, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—3 days, 18 hours instruction

**March 8, 1971**

Pediatrics, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—3 days

**March 22, 1971**

Surgery, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—3 days

**April 12, 1971**

Anesthesiology, University of Kansas School of Medicine, Department of Postgraduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—3 days

**April 16, 1971**

15th Annual Symposium on Infectious Diseases, American Academy of General Practice, Volker Boulevard at Brookside, Kansas City, Missouri 64112, At: University of Kansas School of Medicine, Battenfeld Auditorium, Rainbow at 39th Street, Kansas City 66103—1 day

**May 3, 1971**

Coronary Artery Disease, University of Kansas School of Medicine, Department of Post-

graduate Medical Education, 39th and Rainbow Boulevard, Kansas City 66103—2 days

## MISSOURI:

**September 14, 1970**

Symposium on Bone and Joint Roentgenology, Washington University School of Medicine, Mallinckrodt Institute of Radiology, 510 South Kingshighway Boulevard, St. Louis 63110, At: Stouffer's Riverfront Inn, 200 South 4th Street, St. Louis 63102—4½ days

**September 15, 1970**

General Psychiatric Problems in Medical Practice, Department of Neurology and Psychiatry, St. Louis University School of Medicine, 1221 South Grand Boulevard, St. Louis 63104—2 hours/day, 1 day/week for 8 weeks

**September 23, 1970**

Computers in Radiology, University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Road, Columbia 65201, American College of Radiology, At: same—3½ days

**October 5, 1970**

Postgraduate Course in Neuroradiology, Washington University School of Medicine, Mallinckrodt Institute of Radiology, 510 South Kingshighway, St. Louis 63110, At: Stouffer's Riverfront Inn, 200 South 4th Street, St. Louis 63102—5 days

**October 6, 1970**

Cytogenetics, Committee on Continuing Education of the American Society of Clinical Pathologists, 710 South Wolcott, Chicago 60612, At: Research Hospital and Medical Center, Meyer Boulevard at Prospect Avenue, Kansas City 64132—2 days

**October 21, 1970**

Neurology and Sensory Disorders, Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, American Academy of General Practice and Danciger Institute for the Health Sciences—3 days

**October 27, 1970**

20th Annual Meeting, Congress of Neurological Surgeons, Incorporated, 2500 North State Street, Jackson, Mississippi 39216, At: Chase-Park-Plaza Hotel, St. Louis—5 days

**November 10, 1970**

Sexual and Marital Problems, Department of Neurology and Psychiatry, St. Louis University School of Medicine, 1221 South Grand Boulevard, St. Louis 63104, At: Psychoana-



## *Postgraduate Courses*

lytic Foundation, 4524 Forest Park Boulevard, St. Louis 63108—2 hours/day, 1 day/week for 6 weeks

**November 11, 1970**

Sex and Gender Deviations in Children and Adolescents, University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Road, Columbia 65201, Missouri Division of Mental Health, Mid-Missouri Mental Health Center—2 days

**November 11, 1970**

Recent Advances in Pediatrics, Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, American Academy of General Practice and Danciger Institute for the Health Sciences—3 days

**November 12, 1970**

Psychological Factors in Industrial Medicine, Department of Neurology and Psychiatry, St. Louis University School of Medicine, 1221 South Grand Boulevard, St. Louis 63104—2 hours/day, 1 day/week for 8 weeks

**December 2, 1970**

Diagnosis and Treatment of Common Respiratory Ailments: Asthma, Emphysema, Respiratory Distress Syndrome, University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Boulevard, Columbia 65201—1 day

**January 12, 1971**

Interviewing Techniques and Diagnostic Evaluations, Department of Neurology and Psychiatry, St. Louis University School of Medicine, 1221 South Grand Boulevard, St. Louis 63104—2 hours/day, 1 day/week for 12 weeks

**January 13, 1971**

Pulmonary Diseases and Infectious Diseases of the Chest, Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, American Academy of General Practice and Danciger Institute for the Health Sciences—3 days

**February 3, 1971**

Office Pediatrics, University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Road, Columbia 65201—1 day

**February 26, 1971**

American College of Physicians Missouri Meeting and Missouri Society of Internal Medicine, University of Missouri, Columbia

Medical Center and Extension Division, 807 Stadium Road, Columbia 65201, American College of Physicians, Missouri Society of Internal Medicine—2 days

**March 10, 1971**

Comprehensive View of Gastrointestinal Disorders, Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, Danciger Institute for the Health Sciences, American Academy of General Practice—3 days

**March 10, 1971**

Drug Therapy (Acid Based Drug Reactions), University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Road, Columbia 65201—2 days

**April 7, 1971**

Urology Seminar, University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Road, Columbia 65201, Kansas City General Hospital and Medical Center, At: Plaza Inn, 47th at Main, Kansas City—2 days

**April 14, 1971**

Comprehensive View of Cardiovascular Diseases, Menorah Medical Center, 4949 Rockhill Road, Kansas City 64110, American Academy of General Practice and Danciger Institute for the Health Sciences—3 days

**April 26, 1971**

Pediatric Radiology, University of Missouri, Columbia Medical Center and Extension Building, 807 Stadium Road, Columbia 65201, At: Children's Mercy Hospital, Kansas City—5 days

**May 12, 1971**

Spring Clinical Conference (Surgery), University of Missouri, Columbia Medical Center and Extension Division, 807 Stadium Boulevard, Columbia 65201—2 days

## **TEXAS:**

**September 17, 1970**

American Heart Association Annual Scientific Session, American Heart Association, Texas Affiliate, Box 9928, Austin 78757, University of Texas Medical System, At: Sheraton-Dallas Hotel, Dallas—3 days

**September 17, 1970**

Cardiovascular Disease, Dallas Internist Club, 9229 Vinewood Drive, Dallas 75228, At: B&B Restaurant, Banquet Room, 3520 Oak Lawn, Dallas—1 hour/day, 1 day/week for 8 weeks



**September 28, 1970; November 30, 1970;  
March 1, 1971; May 3, 1971**

Introduction to Allergy, USAF, Surgeon General, Randolph AFB 78148, At: Wilford Hall USAF Medical Center, Lackland AFB, San Antonio 78236—10 days

**October 5, 1970; February 22, 1971**

Aerospace Medicine, Primary, USAF, Surgeon General, Randolph AFB 78148, At: USAF School of Aerospace Medicine, Brooks AFB, San Antonio 78235—45 days

**October, 1970**

Emotional Dimensions of Medical Problems, University of Texas Southwestern Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas 75235

**October 2, 1970**

Annual Psychiatric Institute, Brooke General Hospital, Department of Psychiatry and Neurology, Fort Sam Houston, San Antonio 78216—1 day

**November 5, 1970**

Third Annual Trauma Course, University of Texas Medical Branch, Departments of Postgraduate Education and Surgery, 915 Strand, Galveston 77550, At: Holiday Inn, Galveston—2 days

**November 12, 1970**

Gastroenterology, Dallas Internist Club, 9229 Vinewood Drive, Dallas 75228, At: B&B Restaurant, 3520 Oak Lawn, Dallas—1 hour/day, 1 day/week for 6 weeks

**November 18, 1970**

15th Annual Clinical Conference: Progress in the Rehabilitation of the Cancer Patient, University of Texas MD Anderson Hospital and Tumor Institute at Houston, 6723 Bertner Avenue, Houston 77025, At: Shamrock Hilton Hotel, 6900 Main, Houston 77025—3 days

**December 10, 1970**

Obstetrics and Gynecology, Southwestern Gynecologic Assembly, 433 Medical Arts Building, Dallas 75201, At: Sheraton-Dallas Hotel, Dallas 75221

**December 10, 1970**

Gastrointestinal Endoscopy, University of Texas Graduate School of Biomedical Sciences, P.O. Box 20367, Houston 77025, MD Anderson Hospital and Tumor Institute, At: same—3 hours/day, 1 day/week for 26 weeks

**December 14, 1970**

Medical Aspects of Advanced Warfare, USAF, Surgeon General, Randolph AFB 78148, At: Medical Service School, Sheppard AFB, Wichita Falls 76311—5 days

**November 2, 1970**

Laryngectomy, University of Texas Medical Branch Hospitals, Department of Postgraduate Education and Department of ENT, 915 Strand, Galveston 77550, At: Holiday Inn, Galveston 77550—2 days

**January, 1971**

Interviewing and Psychotherapy, University of Texas Southwestern Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas 75235—2 hours/day, 1 day/week for 8 weeks

**January 15, 1971**

Annual Program in Hematology, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025, At: same—2 days

**January 28, 1971**

Clinical Psychiatry, Part II, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025—2 hours/day, 1 day/week for 14 weeks

**January, 1971**

Allergy, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025—2 hours/day

**February 11, 1971**

Metabolic Disease, Dallas Internist Club, 9229 Vinewood Drive, Dallas 75228, At: Banquet Room, B&B Restaurant, 3520 Oak Lawn, Dallas—1 hour/day, 1 day/week for 5 weeks

**March 2, 1971**

Clinical Cardiology, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025—2 hours/day, 2 days/week for 27 weeks

**March 13, 1971**

Acute Medicine and Cardiopulmonary Resuscitation, University of Texas Southwestern Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas 75235, At: Parkland Memorial Hospital, 5201 Harry Hines Boulevard, Dallas 75235—1 day

**March 31, 1971**

24th Annual Symposium on Fundamental Cancer Research—Environment and Cancer, University of Texas MD Anderson Hospital



## *Postgraduate Courses*

and Tumor Institute at Houston, 6723 Bertner Avenue, Houston 77025, At: Shamrock Hilton Hotel, 6900 Main, Houston 77025—3 days

**March 14, 1971**

Third Annual Clinical Cancer Conference, University of Texas Southwestern Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas 75235—1 day

**March 15, 1971**

Tri-Service Pediatric Seminar, USAF, Surgeon General, Randolph AFB 78148, At: Wilford Hall USAF Medical Center, Lackland AFB, San Antonio 78236—4 days

**April 5, 1971**

Surgical and Orthopedic Aspects of Trauma, Brooke General Hospital, Fort Sam Houston, San Antonio 78234—4½ days

**April, 1971**

9th Annual Teaching Conference, Children's Hospital, Santa Rosa Medical Center, 519 West Houston, San Antonio 78207, University of Texas Medical School at San Antonio—2 days

**April 8, 1971**

Annual Pediatrics Postgraduate Course, University of Texas Medical Branch Hospital, 915 Strand, Galveston 77550—3 days

**April 22, 1971**

Hematology and Oncology, Dallas Internist Club, 9229 Vinewood Drive, Dallas 75228, At: B&B Restaurant, Banquet Room, 3520 Oak Lawn, Dallas—1 hour/day, 1 day/week for 5 weeks

**May 10, 1971**

USAF Society of Clinical Surgeons' Symposium, USAF, Surgeon General, Randolph AFB 78148, At: Wilford Hall USAF Medical Center, Lackland AFB, San Antonio 78236—3 days

**May 10, 1971**

Operational Aeromedical Problems, USAF, Surgeon General, Randolph AFB 78148, At: USAF School of Aerospace Medicine, Brooks AFB, San Antonio 78235—5 days

**May, 1971**

Postgraduate Pediatric Conference, Scott and White Memorial Hospital and Scott, Sherwood and Brindley Foundation, 2401 South 31st Street, Temple 76501—1 day

**May 19, 1971**

Vagaries in the Treatment of Coronary Artery Disease, American College of Cardiology, 9650 Rockville Pike, Bethesda, Maryland 20014, Baylor College of Medicine, At: Baylor College of Medicine, Houston—3 days

**June 7, 1971**

Annual Anesthesiology Review Session, USAF, Surgeon General, Randolph AFB 78148, At: Wilford Hall USAF Medical Center, Lackland AFB, San Antonio 78236—5 days

**June 12, 1971**

Fifth Annual Postgraduate Pediatric Seminar, University of Texas Southwestern Medical School at Dallas, 5323 Harry Hines Boulevard, Dallas 75235, At: Children's Medical Center, 1935 Amelia Street, Dallas 75235—2 days

**June 16, 1971**

Clinical Chemistry, Commission on Continuing Education of the American Society of Clinical Pathologists, 710 South Wolcott, Chicago 60612, At: University of Texas Medical Branch, Galveston 77550—3 days

**September, 1971**

Dermal Pathology, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025, University of Texas MD Anderson Hospital and Tumor Institute—5 days

**November, 1970**

Clinical Toxicology, University of Texas Graduate School of Biomedical Sciences, 6410 Fannin, Houston 77025—1 day

**November 4, 1971**

Doctor Bunkley Lecture in Obstetrics-Gynecology, Scott and White Memorial Hospital and Scott, Sherwood and Brindley Foundation, 2401 South 31st Street, Temple 76501—1 day

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# MEDICAL CENTER FACULTY AVAILABLE FOR LECTURES AND THEIR TOPICS 1970-71

Medical School faculty members are frequently called upon to participate in scientific programs around the State. In fact, this continuing education role, one of the several professional functions faculty members serve outside their institutions, constitutes one of the principal influences which a medical school has on the practice of medicine in the entire area which it serves.

Requests continue to come in from County Medical Societies and other professional organizations for speakers. Often specific speakers or topics are requested, occasionally on embarrassingly short notice. Too frequently selections are made on meager information or are based simply on personal acquaintance with little or no system and even less mutual understanding regarding projection facilities, expenses and other arrangements. It is to clarify and extend the usefulness of the University of Oklahoma School of Medicine as a source of speakers for programs throughout the State that this roster of available individuals and suggested subjects is being published.

This listing was compiled from volunteers among both full-time and part-time faculty. It is by no means complete (has actually been pared down) and will be revised periodically. Subjects included are those of particular interest to the individuals and presumably are already prepared for presentation. Many others are of course available on request but it is hoped that this listing of topics may make easier the task of program chairmen and perhaps even awaken some new areas of interest.

Except in unusual circumstances, University funds are not available for this purpose. It is expected that local groups will defray the travel expenses of their guest speakers (as, for example, in accordance with the regular State scale of nine cents per mile) and other out-of-pocket expenses. The matter of an honorarium is left to the discretion of the host group.

Arrangements for speakers may be made with them individually or by calling the Postgraduate Office at the University: (405) 236-1366, Ext. 440, preferably several weeks

in advance. Any of us concerned with continuing education at OU will be glad to confer regarding special needs such as the planning of panels or even of a series of programs to cover particular fields of interest.

Copies of this listing are available from the Postgraduate Office.

DALE GROOM, M.D.

Associate Dean

for Continuing Education

## ALLERGY

Johnny A. Blue, M.D.

430 N.W. 12th Street

Oklahoma City, Oklahoma 73103

1. Bronchial Asthma, Hayfever, Allergic Rhinitis, Urticaria, Eczema (Allergic)
2. Allergy Today—Human Aspects of Allergy Management

Leon Horowitz, M.D.

109 Utica Square Medical Center

Tulsa, Oklahoma 74114

1. Pediatric Allergy—All Phases

George L. Winn, M.D.

711 N.W. 10th Street

Oklahoma City, Oklahoma 73103

1. Allergy
2. Fundamentals of Genetics

## DERMATOLOGY

O'Tar T. Norwood, M.D.

1211 North Shartel

Oklahoma City, Oklahoma 73103

1. Diagnosis and Therapy of Common Dermatological Problems

Julian W. Swann, M.D.

301 N.W. 12th Street

Oklahoma City, Oklahoma 73103

1. Skin Cancers and Their Treatment

## INTERNAL MEDICINE

Richard Bottomley, M.D.

825 N.E. 13th Street

Oklahoma City, Oklahoma 73104



## *Faculty Available*

1. Recent Developments in the Therapy of Acute Leukemia
2. Genetic Aspects of Cancer

Sylvia S. Bottomley, M.D.

921 N.E. 13th Street

Oklahoma City, Oklahoma 73104

1. Diagnosis and Treatment of Nutritional and Hemolytic Anemias
2. The Diagnosis and Management of Porphyrias

R. E. Chanes, M.D.

825 N.E. 13th Street

Oklahoma City, Oklahoma 73104

1. Chemotherapy in Unresectable Lung Cancer
2. Cytosine Arabinoside in Acute Leukemias

Paul T. Condit, M.D.

825 N.E. 13th Street

Oklahoma City, Oklahoma 73104

1. Management of the Patient with Cancer

John W. DeVore, M.D.

1214 North Hudson

Oklahoma City, Oklahoma 73103

1. Coagulation Problems: Treatment of Acute Hemorrhage
2. Treatment of Malignancies: Chemotherapy, When and Why

Edward D. Frohlich, M.D.

Department of Medicine

University of Oklahoma Medical Center

Oklahoma City, Oklahoma 73104

1. Evaluation and Treatment of the Hypertensive Patient
2. A More Rational and Specific Approach to the Treatment of Hypertension

Dale Groom, M.D.

University of Oklahoma Medical Center

Oklahoma City, Oklahoma 73104

1. Management of Congestive Heart Failure
2. Diagnostic Electrocardiograms

James W. Hampton, M.D.

University of Oklahoma Medical Center

Oklahoma City, Oklahoma 73104

1. Intervascular Coagulation and Thrombotic Diseases
2. Anticoagulants and Their Future and Fortune

C. M. Harvey, M.D.

5700 N.W. Grand Blvd.

Oklahoma City, Oklahoma 73112

1. Management of Respiratory Insufficiency
2. Eradication of Tuberculosis in Office and Hospital

Ben I. Heller, M.D.

Department of Laboratory Medicine

University of Oklahoma Medical Center

Oklahoma City, Oklahoma 73104

1. Laboratory Medicine and Clinical Practice
2. Treatment of Acute Renal Failure

R. Palmer Howard, M.D.

History of Medicine

820 N.E. 15th Street

Oklahoma City, Oklahoma 73104

1. Health Problems in the Indian Nations During the Nineteenth Century
2. The Organization of the Medical Profession before Oklahoma Statehood

William K. Ishmael, M.D.

600 N.W. 11th Street

Oklahoma City, Oklahoma 73103

1. Gout and the Crystalline Synovial Disorders
2. Systemic Manifestations of Primary Osteoarthritis

Robert D. Lindeman, M.D.

Veterans Administration Hospital

921 N.E. 13th Street

Oklahoma City, Oklahoma 73104

1. What's New in the Early Treatment of the Chronic Renal Diseases
2. The Oklahoma-Southern Kansas Kidney Foundation, Inc.

W. T. McCollum, M.D.

437 N.W. 12th Street

Oklahoma City, Oklahoma 73103

1. Clinical Use of Digitalis Preparations
2. Treatment of Coronary Heart Disease—Pro and Con

B. J. Matter, M.D.

Veterans Administration Hospital

921 N.E. 13th Street

Oklahoma City, Oklahoma 73104

1. Treatment of Renal Failure
2. The Place of Dialysis and Transplantation in Renal Failure



H. G. Muchmore, M.D.

University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Role of Infection in Chronic Lung Disease
2. Spotted Fever in Oklahoma

R. Wayne Neal, M.D.

St. John's Hospital  
Tulsa, Oklahoma 74104

1. Clinical Discussion of Patient(s) with Acquired or Congenital Heart Disease—Child or Adult—Patient presented with appropriate data by inviting group
2. Coronary Artery Disease—Diagnosis and Management

C. Dowell Patterson, M.D.

University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Rehabilitation of Patients with Chronic Obstructive Pulmonary Disease
2. Recognition and Management of Acute Respiratory Failure

Raymond L. Rose, M.D.

437 N.W. 12th Street  
Oklahoma City, Oklahoma 73103

1. Experiences With Selective Coronary Arteriography with Presentation of Selected Cine-films of Normal and Abnormal Anatomy

R. T. Schultz, M.D.

Veterans Administration Hospital  
921 N.E. 13th Street  
Oklahoma City, Oklahoma 73104

1. Diagnosis and Treatment of Rheumatoid Arthritis
2. Pathogenesis, Diagnosis and Treatment of Gout

M. B. Shook, M.D.

1211 North Shartel  
Oklahoma City, Oklahoma 73103

1. Cancer Chemotherapy
2. Diagnosis of Anemia

Paul D. Stein, M.D.

University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Newer Aspects of Pulmonary Embolism
2. The Difficult Diagnosis of Coronary Heart Disease

William Best Thompson, M.D.

1111 North Lee  
Oklahoma City, Oklahoma 73103

1. Cardiovascular Diseases

Jack D. Welsh, M.D.

University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Milk Intolerance Due to Intestinal Lactase Deficiency
2. Malabsorption Syndromes in Adults

Kelly M. West, M.D.

University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Diagnosis of Diabetes
2. Treatment of Diabetes

W. H. Whitcomb, M.D.

Veterans Administration Hospital  
921 N.E. 13th Street  
Oklahoma City, Oklahoma 73104

1. The Anemia of Renal Disease—Clinical and Research Aspects
2. The Humoral Control of Erythropoiesis

James S. Williams, M.D.

Price Tower  
Bartlesville, Oklahoma 74003

1. Control of Cardiac Arrhythmias by Cardioversion
2. Coronary Care Unit

## MEDICAL ADMINISTRATION

Charles M. Cameron, Jr., M.D.

800 N.E. 13th Street  
Department of PM and PH  
Oklahoma City, Oklahoma 73104

1. Administration of Health Services
2. Comprehensive Health Planning

Hayden H. Donahue, M.D.

Central State Griffin Memorial Hospital  
Norman, Oklahoma 73069

1. The Problem of Mental Health Illness—The Delivery of Mental Health Services
2. Alcohol and Drug Abuse

Albert J. Glass, M.D.

320 State Capitol  
Oklahoma City, Oklahoma 73105

1. Oklahoma State Mental Health Program
2. Systems for the Delivery of Mental Health Services Including Alcoholism



## *Faculty Available*

### **NEUROSURGERY**

Kent Braden, M.D.  
1211 North Shartel  
Oklahoma City, Oklahoma 73103

1. Neurosurgery

R. G. Fisher, M.D.  
University of Oklahoma Medical Center  
Oklahoma City, Oklahoma 73104

1. Peripheral Nerve Lesions
2. Disc Protrusions—All Levels

Don F. Rhinehart, M.D.  
1211 North Shartel  
Oklahoma City, Oklahoma 73103

1. Strokes
2. Management of Pain

### **OBSTETRICS AND GYNECOLOGY**

R. D. Anspaugh, M.D.  
5700 N.W. Grand Blvd.  
Oklahoma City, Oklahoma 73112

1. Para-Cervical Block in Labor
2. Supra-pubic Bladder Drainage Using Polyethylene Tubing

Warren M. Crosby, M.D.  
800 N.E. 13th Street  
Department of Gyn-Ob  
Oklahoma City, Oklahoma 73104

1. Erythroblastosis Fetalis
2. Automobile Accidents and Pregnant Passengers

Jed E. Goldberg, M.D.  
6465 South Yale  
Tulsa, Oklahoma 74135

1. Culdoscopy

Gordon K. Jimerson, M.D.  
800 N.E. 13th Street  
Department of Gyn-Ob  
Oklahoma City, Oklahoma 73104

1. Evaluation and Treatment of Pelvic Pain
2. Evaluation and Treatment of Adnexal Masses

Joseph W. Kelso, M.D.  
1211 North Shartel  
Oklahoma City, Oklahoma 73103

1. The Surgical Treatment of Carcinoma of the Cervix followed by External Irradiation
2. Gynecological — Urological Complications and Their Management

Audrey J. McMaster, M.D.  
800 N.E. 13th Street  
Department of Gyn-Ob  
Oklahoma City, Oklahoma 73104

1. Teenage Pregnancy
2. The Physician's Role and Responsibility in Sex Education

James A. Merrill, M.D.  
800 N.E. 13th Street  
Department of Gyn-Ob  
Oklahoma City, Oklahoma 73104

1. Diagnosis and Treatment of Pelvic Cancer
2. Endometriosis

A. S. Porter, M.D.  
4200 South Douglas  
Oklahoma City, Oklahoma 73109

1. Ultra Sound Evaluation of Fetal Life
2. Cyrosurgery of the Cervix

Tony G. Puckett, M.D.  
1106 West MacArthur  
Shawnee, Oklahoma 74801

1. Anemias and Leukemias in Pregnancy
2. Treatment of Metastatic Adenocarcinoma of Endometrium and other Pelvic Malignancies

L. D. Threlkeld, M.D.  
3141 N.W. Expressway  
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## O.C. Clinical Society Convenes in October

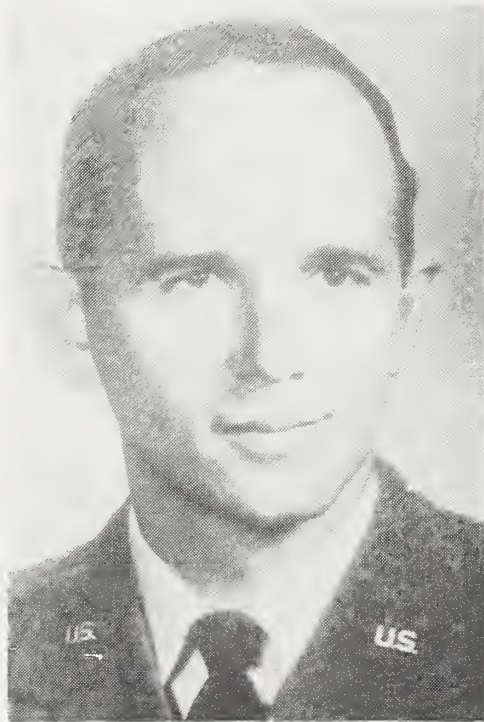
Ten outstanding guest speakers will highlight the 40th Annual Fall Conference of The Oklahoma City Clinical Society, October 26th, 27th, 28th, 1970. Convening in the convention facilities of the Hotel Oklahoma in Oklahoma City, general assemblies will be held from 9:00 a.m. until 5:00 p.m., Monday through Wednesday.

Keynote speaker for the opening Monday morning session will be Lt. Col. Kenneth H. Cooper, Senior Flight Surgeon and Director, Aerospace Medical Laboratory, Wilford Hall USAF Hospital, San Antonio, Texas. Doctor Cooper is the author of the best-seller "Aerobics." Also appearing before the Monday morning session will be John P. Naughton, M.D., Director of Rehabilitation Medicine, George Washington University Hospital and Medical Center. Topics to be covered will be "Testing and Developing Cardiovascular Fitness," "Metabolic Changes Observed With Exercise," "Guidelines in the Management of the Exercising Patient," and "Rehabilitation of the Patient with Healed Myocardial Infarction."

The Monday noon luncheon will feature Doctor Cooper presenting "The Role of Exercise in Achieving Optimum Health." Wives of attending physicians are urged to attend this luncheon and hear Doctor Cooper.

On Monday afternoon, the University of Oklahoma Medical Center will again present "What's New and What's Usable of What's New." Faculty members have been selected to present this discussion.

The Oklahoma City Clinical Society and Marion Laboratories will entertain the physicians and their wives with an Oyster and "Keg" Party on Monday evening, 6:00 p.m. to 7:30



LT. COL. COOPER

p.m. in the Oklahoma Ballroom. Following this social hour, specialty dinners will be held in various rooms of the hotel by the following specialties: Dermatology, E.E.N.T., internal medicine, obstetrics-gynecology, surgery, radiology and urology.

### Other Speakers Named

Appearing on Tuesday and Wednesday will be Don W. Chapman, M.D., Houston, Texas, (Medicine); Robert J. Freeark, M.D., Chicago, Illinois, (Surgery); Robert W. Goltz, M.D., Denver, Colorado, (Dermatology); Kermit E. Krantz, M.D., Kansas City, Kansas, (Obstetrics-Gynecology); Hunter L. Little, M.D., Palo Alto, California, (Ophthalmology); Donn G. Mosser, M.D., Minneapolis, Minnesota, (Radiology); and Vincent M. Simonton, M.D., Rochester, Minnesota, (Otolaryngology).

Surgical Grand Rounds will be held Tuesday afternoon and a roundtable luncheon on Wednesday will feature all guest speakers.

The annual banquet honoring the guest speakers will be held on Tuesday evening in the ballroom of the Hotel Oklahoma at 8:00 p.m. A social hour preceding the banquet will be at 7:00 p.m. in the Cimarron Room. Entertainment for the evening will be furnished by Walter Zaney Blaney, Ambassador of Texas, an entertainment as big as Texas itself.

The local medical auxiliary has planned special day-time events for the visiting ladies, which will include a tour of the Cowboy Hall of Fame, coffee at the Clanton Antique Galleries and a "Chew and Chat" picnic luncheon at the home of the auxiliary president.

Upon recommendation of the Oklahoma Academy of General Practice, the conference is acceptable for 30 prescribed hours of credit by the American Academy of General Practice. A registration fee of \$25.00 includes all three luncheons as well as other planned social events. □

## Chest Physicians to Meet in California

The Second Fall Scientific Assembly of the American College of Chest Physicians will meet in Los Angeles, California, October 25th-29th, 1970, in the Century Plaza Hotel.

The theme for this year's meeting will be Multidisciplinary Approach to Pulmonary and Cardiovascular Disease. In addition to an outstanding group of guest speakers for the assembly there will be 23 scientific exhibits.

There is no registration fee for members of the American College of Chest Physicians, program participants, medical students, interns and residents, however deadline for receipt of registrations is October 1st.

Registration should be mailed to the American College of Chest Physicians, 112 East Chestnut Street, Chicago, Illinois 60611. □



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## U.S. Chamber Attacks Welfare Reform Bill

Members of the United States Chamber of Commerce are being urged to oppose the passage of the administration's welfare reform bill, HR 16311, currently pending in the U. S. Senate. In a letter to all local chamber and association executives, the U. S. Chamber asked, "Are your members ready to pay the extra taxes that will be needed to double the welfare rolls? Do they understand that the so-called welfare 'reform' bill will guarantee not just a minimum family income, but also a tax increase?"

The letter then went on to describe a folder published by the U. S. Chamber entitled "Some Shocking Facts About the Welfare Reform Bill . . . HR 16311." This folder pointed out that at the present time there were 188,000 welfare recipients in the state of Oklahoma and that passage of this bill would increase this number by an additional 177,500, for an increase of 94 percent. Nationally the welfare rolls would more than double . . . up 128 percent . . . by adding about 13 million people to the 10 million already on welfare. This increase ". . . is because the bill doesn't aim to help just those currently on welfare—the aged, blind, and disabled, and the unemployed parents with dependent children. It launches a new program of guaranteeing an annual income to families where the father is already employed, but earning less than is considered a proper income. It is this new program that makes the bill more welfare expansion 'than' reform."

The following information was taken from the folder prepared by the U. S. Chamber:

"Senator Long (D-La.), Chairman of the Senate Finance Committee, says the proposal 'would place one person in every eight in America on Public Welfare.' In some states, the ratio would be even higher. It is estimated that at least 35 percent of Mississippi's population would be on welfare. In two states, welfare

rolls would show increases of 485 percent.

"The trouble with starting a guaranteed income plan is that, once it is on the law books, then politicians would be competing for votes by promising to increase the income level and extend its subsidy to still more people. HR 16311 promises a federal income payment of up to \$1,600 for a family of four—in addition to other welfare-related aids. Raising that payment level automatically covers more people and increases cost. And that is what would be done in the future. As Senator Long has said, the bill 'would set a pattern . . . for years to come, until we have as much as 50 percent of our population drawing welfare payments.' Even today, Senator McCarthy (D-Minnesota) asked for a \$5,500 floor, which would come close to covering half the population—at an annual cost of \$60 billion. That's the demand of the militant national welfare rights organization, whose slogan is '\$5,500 or fight.'

"Federal welfare costs are now 4.4 billion dollars a year. Under this bill, they would zoom to an estimated \$10.8 billion for current fiscal year 1971 and to \$11.8 billion for fiscal 1972—more than \$22 billion for the first two years. This whopping expenditure is a major reason the federal budget is already being predicted in deficit for both years . . .

"If the bill really promised to encourage welfare recipients to work, then there might be hope that welfare costs would eventually go down. But the bill's incentive seems to be in the opposite direction. For example, an unemployed woman in New York, heading a four-person family, would receive more net welfare-related income (tax free) than a woman earning \$7,000 at work. So, why work? Over the past ten years, an annual average of some 250,000 male-headed families have risen out of poverty through their own efforts. This suggests there is no need for the guaranteed income plan. In fact, one may question whether such a plan might not actually deter such individual efforts—and simply create

a larger class of permanent welfare recipients.

"The huge high cost of the guaranteed income plan at the start, and the fantastic cost in the future, would place a severe strain on the federal budget. Present tax revenues are not even sufficient to pay for the bill's starting cost, much less future costs. But, we cannot continue running severe deficits every year; the inflationary effect is just too painful. Therefore, tax increases would become essential to pay for this new program and keep the budget reasonably near balance. And with the anticipated expansions of the program, such tax increases would likely come with regularity." □

## Second Family Practice Board Exam Announced

The American Board of Family Practice has announced that it will give its second examination for certification in various centers throughout the United States on February 27th, and 28th, 1971. Deadline for receiving completed applications in the Board office is November 1st, 1970.

Information regarding the examination and eligibility for the examination may be obtained by writing Nicholas J. Pisacano, M.D., Secretary-Treasurer, American Board of Family Practice, Inc., University of Kentucky Medical Center, Lexington, Kentucky 40506. □

## Otolaryngology For The Family Practitioner Planned

The University of Miami School of Medicine Department of Otolaryngology is presenting a postgraduate course entitled "Otolaryngology for the Family Practitioner." The course will be held November 13th-14th, 1970, at the Sheraton Four Ambassadors Hotel in Miami, Florida. Credit will be offered by the American Academy of General Practice.

Detailed information is available from Frederick W. Pullen, II, M.D., Neuro-Otologic Laboratory, University of Miami School of Medicine, P.O. Box 875, Biscayne Annex, Miami, Florida 33152. □



## Carpenter Named To Public Health Post



A three-year appointment to serve on a U. S. Public Health Service Advisory Committee on Immunization Practices has been given to R. Leroy Carpenter, M.D., Chief of Personal Health Services for the Oklahoma State Department of Health. The appointment was announced by Roger O. Egeberg, M.D., Assistant Secretary of Health and Scientific Affairs for the Department of Health, Education and Welfare.

Formed in 1965, the nine-man committee provides advice and guidance on immunizations for effective disease control, reviews and reports on immunization practices, and recommends improvements in the national program. Doctor Carpenter is the first Oklahoman to serve on the committee.

Doctor Carpenter has directed Oklahoma's immunization program for the past four years and is the author of thirteen articles on immunization and related subjects. In addition to these activities, he presently directs programs on venereal disease, tuberculosis control, chronic disease control, emergency medical services and epidemiology. He serves as Assistant Clinical Professor of Medicine and Community Health at the OU Medical Center. □

## DEATH

MARK H. DONOVAN, M.D.

1912-1970

Tulsa pediatrician, Mark H. Donovan, M.D., died July 15th, 1970. A native of Oklahoma City, Doctor Donovan received his M.D. degree from the St. Louis University School of Medicine in 1938. Before establishing his practice in Tulsa, he had practiced in Duncan and Marlow, Oklahoma, and spent five years with the Army Medical Corps during World War II.

Doctor Donovan had served one year as pediatrician for the Tulsa City-County Moton Health Center in addition to his private practice. He was a member of the Alpha Omega Alpha. □

## BOOK REVIEWS

**THE EVOLUTION OF PREVENTIVE MEDICINE IN THE UNITED STATES ARMY, 1607-1939.** Stanhope Bayne-Jones, M.D. Office of the Surgeon General, Department of the Army, Washington, D.C., 1968.

Several years ago, while preparing a presentation for the Students' History of Medicine Society, I became acquainted with a remarkable military medical officer, Doctor Joseph Jones, a Confederate Surgeon. Doctor Jones, during the War Between the States, observed bacteria in the lesions of hospital gangrene and in the mesenteric lymph nodes and Peyer's patches in typhoid fever, undoubtedly seeing the typhoid bacillus fully some 20 years before Eberth made similar observations. He also clearly described the malarial parasite, although he did not term it as such. His monumental "Medical and Surgical Memoirs" is a classic reference on Civil War medicine.

Because of this interest in Joseph Jones, it was a particular privilege to have the opportunity to know his grandson, Doctor Stanhope Bayne-Jones, formerly Dean of the Yale University School of Medicine and retired Brigadier General of the U. S. Army Medical Corps. Doctor Bayne-Jones had a distinguished career in bacteriology and preventive medicine and, in later years, has been an active military and medical historian. In addition he personifies

the word gentleman. He describes in his book the contributions of Doctor Joseph Jones but, in his characteristic modest fashion, makes no mention of the family relationship.

The late Brigadier General James Stevens Simmons, formerly Chief of the Preventive Medicine Service of the U. S. Army, began a draft of his manuscript entitled "History of Preventive Medicine in the U. S. Army in World War II." The draft was unfinished at the time of his death in July 1954 and the Surgeon General's Advisory Editorial Board asked Doctor Bayne-Jones to assume the responsibility, which he did. As he states in the preface, "As familiarity with the subject increased, my ideas enlarged, and in 1962, when I began writing, I saw the need and possibilities of a new composition differing from the old or usually reiterated paraphrases of previous reviews by utilization of original sources." The author began working on this monograph in January 1962. In June 1964, he moved from the Historical Unit, United States Army Medical Service, to the National Library of Medicine, where I had the pleasure of meeting him.

This monograph describes the evolution of preventive medicine over a period spanning 332 years from Jamestown in May 1607 to the outbreak of World War II in Poland on September 1, 1939. It is arbitrarily divided into sections or parts, based



chiefly on the occurrence of wars within the indicated period. This division conforms also with related civil events, such as the sanitary movements and reforms of the mid-nineteenth century, which were quickened by the Crimean War and the American Civil War. As the author states, civilian and military medicine are closely related. This monograph amply documents the contributions which military physicians have made to our knowledge of preventive medicine.

The book is divided into ten chapters. Among the more valuable aspects are the 39 illustrations of important military physicians ranging from Sir John Pringle, the founder of modern, military preventive medicine and originator of the Red Cross concept; Edward Jenner, the first to practice smallpox vaccination; Pas-

teur, Kock, Lister, Theobald Smith, Walter Reed, Gorgas, W. H. Welch, Hans Zinsser, and other famous names in military and preventive medicine. Because the author was intimately involved with military medicine the majority of his professional life, this has given him great insight into important occurrences and has made the book even more readable and interesting.

All physicians concerned with preventive medicine and those interested in the history of military medicine will find this monograph a valuable and readable reference.—*Harris D. Riley, Jr., M.D.*

*Note: Since starting this review, word has been received that Doctor Bayne-Jones died in Washington recently at the age of 82 years.*

**IMMUNIZATION AGAINST INFECTIOUS DISEASES.** British Medical Journal, volume 25, number 2, May 1969.

For those concerned with infectious diseases and immunization, this is an excellent, comprehensive reference. The series of reviews by British and South African authors maintains the high standards of the Bulletin. The editor, Professor D. G. Evans, introduces the volume with a history of immunization and warns of its known and future hazards, such as the unwitting introduction of fowl leukosis virus into yellow fever vaccine. Doctor Cockburn, of the World Health Organization, discusses mass immunization programs with particular emphasis on remote and tropical countries. Smith of Birmingham relates the chemical basis of vaccine production. There are articles on individual vaccines such as respiratory virus vaccines, rubella, rubeola and others as well as a discussion of human immunoglobulin. This is an excellent reference.—*Harris D. Riley, Jr., M.D.* □

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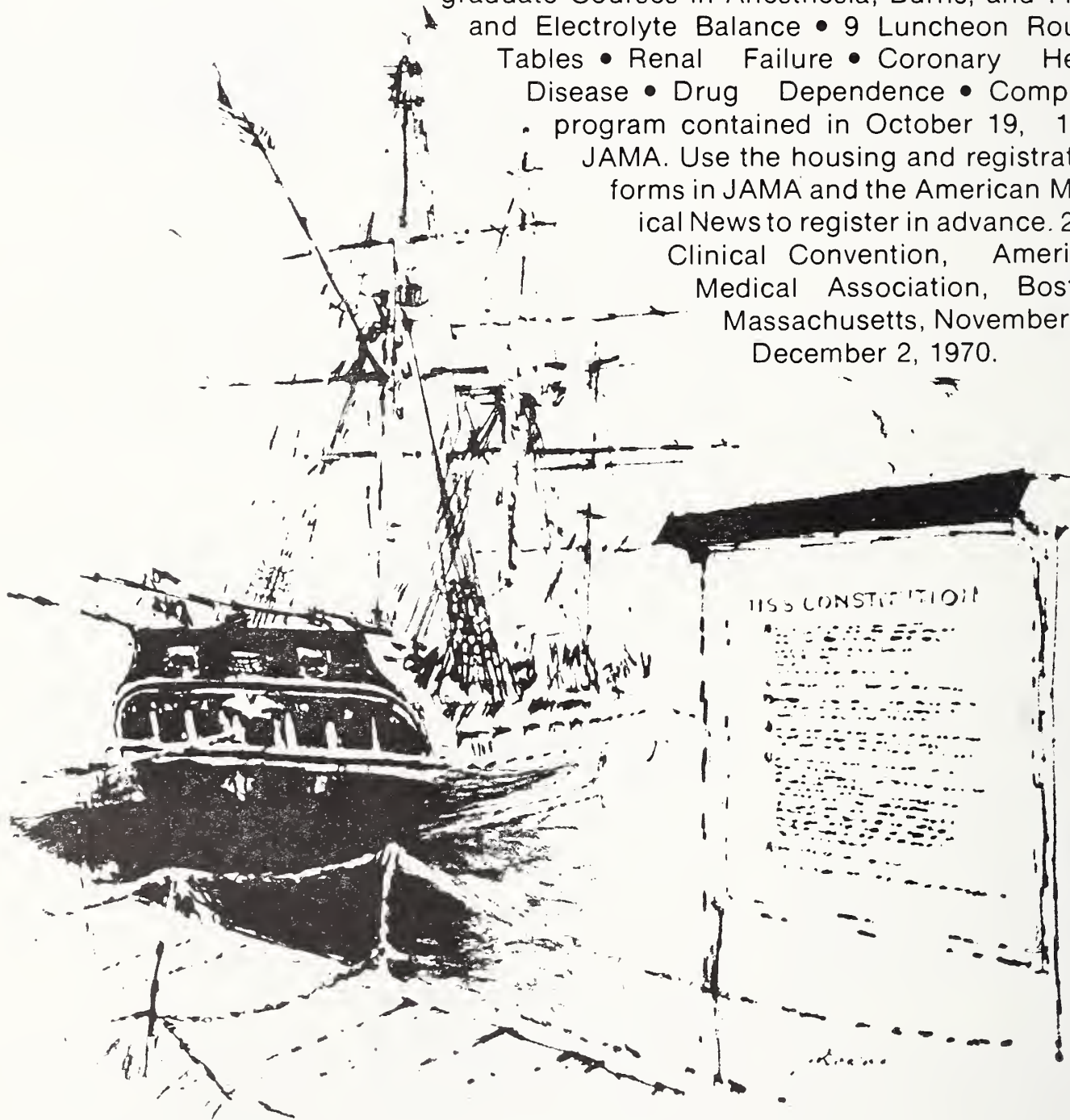
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# *24th AMA Clinical Convention in Boston, Massachusetts November 29-December 2, 1970*

**WHAT'S NEW IN MEDICINE?** Numerous scientific sessions at the AMA 24th Clinical Convention will provide the answers • Clinical Immunology • Clinical Gynecology • Pollution and the Physician • 3 Postgraduate Courses in Anesthesia, Burns, and Fluid and Electrolyte Balance • 9 Luncheon Round Tables • Renal Failure • Coronary Heart Disease • Drug Dependence • Complete program contained in October 19, 1970 JAMA. Use the housing and registration forms in JAMA and the American Medical News to register in advance. 24th Clinical Convention, American Medical Association, Boston, Massachusetts, November 29-December 2, 1970.







MRS. W. M. LEEBRON

Everyone has a tendency to categorize himself by his choice of mate-associates-place of living-profession. How do your choices show that you are promoting the medical profession? Make *Adult Responsibility* evident by your association with those persons and organizations

which promote the positive values of our men in medicine. Become the public relations expert for the medical profession in your community. Membership in the auxiliary demonstrates that we are backing our husbands. A vital link is the member-at-large. Each of us must be completely and currently informed about medical affairs. In this election year, become active in support of those candidates who are cognizant of the dedication of men of medicine and sympathetic to our profession.

Keep well informed about the activities and policies of our national auxiliary. Our object in our bylaws is "to assist the Oklahoma State Medical Association in its program for the advancement of medical and

health education." Mrs. George Miller, State Program Chairman, 1704 S. Owasso, Tulsa 74120, has prepared excellent material which implements the national programs of the auxiliary. Consult her often for those aids which will promote more stimulating programs. Our national auxiliary encourages our cooperation with other organizations whenever feasible. Choose an area of emphasis which is compatible with your own personal interests and promotes the welfare of your community. Please call on your state officers as well as the chairmen of the state committees to clarify your questions. They wait to serve you.

Mrs. Robertson, national president, announced that the AMA has requested that we emphasize blood donor programs and physical fitness for adults. A new package program has been developed for physical fitness and will be available by October.

Make this an exciting year in auxiliary work. Demonstrate that you are a *Responsible Adult* promoting medicine, health careers, legislation as it affects the medical profession, and by supporting AMA-ERF.

Mrs. W. M. Leebron,  
President



**Medicredit, AMA's answer to national health insurance**, as of September 1st, had 23 sponsors in the U. S. Congress. Oklahoma's John Jarman is among them. To date the AMA proposal for the purchase of voluntary health insurance through vouchers and tax credits has been endorsed by nine Democrats and fourteen Republicans. The twenty-three sponsors have introduced a number of bills, but they are basically the same as the AMA's original proposal. The differences will be worked out in Congressional Committees.

**AMA's new pamphlet, What You Should Know About "The Pill,"** is being distributed to all AMA members. The quantity each member receives depends on his specialty. GP's, Internists and OB/GYN's will receive 25 copies each, while specialists in allergy, cardiovascular disease, gastroenterology, general surgery, pediatrics, psychiatry, and pulmonary diseases will receive ten copies. All other physicians will receive one file copy. Physicians may obtain additional free copies by writing to the AMA Order Department, 535 North Dearborn Street, Chicago, Illinois 60610.

**OSMA's Committee on Alcoholism and Drug Abuse** is considering surveying the entire OSMA membership regarding the medical use of amphetamines. Purpose of this survey would be to give the committee information to be used in testimony before a committee of the Oklahoma Legislature that is considering a dangerous substance control bill. One section of the bill could possibly limit the use of amphetamines.

**Top spender on Washington lobbying activities during 1969** was the National Association

of Letter Carriers (AFL-CIO), according to the *Congressional Quarterly*. NALC reported lobbying expenditures of \$295,970. Second highest total—\$250,827—was another postal union, the United Federation of Postal Clerks (AFL-CIO). Activities in 1969 of the two postal unions centered upon obtaining pay raises and efforts to scuttle the administrations proposal to establish a postal corporation. The AMA, with expenditures of \$91,355, ranked fourteenth among 260 organizations filing expense reports with the Clerk of the U. S. House of Representatives.

**A broad spectrum of health groups met in Washington, D.C.,** during late July to discuss the possibility of forming a lobby coalition. Organizers of the meeting were the American Speech and Hearing Association with the aid of the American Optometric Association. The osteopaths were among the groups represented. Other professions included the nurses, psychologists, social workers, medical technologists and the American Pharmaceutical Association. Organizers stated that the idea behind the coalition was to form a sort of counterforce to the AMA Washington lobbying activities. However, participants were quick to point out that this was not an anti-AMA group. The AMA was not represented at the formation meeting.

**Everybody wants to study health care.** Latest organization to enter the arena is the Chamber of Commerce of the United States. In their August *Washington Report* they reported that the National Chamber President, F. Ritter Shumway, has named a special panel to scrutinize the entire health care field. The panel is made up of business leaders divided into four task forces. They will begin "a thorough review of the system this month (to find ways of overcoming the problems of rising costs, inadequate facilities, personnel shortages, and increasing demand, among others." The four task forces are on delivery systems, manpower and facilities, financing, and quality of care and evaluation. □



The

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**BREAKUP** — symbol of the impact of emotional stress. But when the stress exceeds transient rage or depression — and settles into a chronic mixed anxiety depression state — combined tranquilizer-antidepressant therapy could be indicated.





## *Second Thoughts, Anyone?*

**H**UNDREDS OF physicians in this nation are working members of strange committees which were created not long ago by political decree. These groups are called "utilization-review committees" and, ostensibly, their mission is to prevent "overutilization" of hospital facilities by physicians whose patients participate in medical-care cost-reimbursement programs. Committee membership is voluntary, although certainly subject to compromise.

Each physician who agreed to accept such an assignment surely had his personal, individual reasons. Most members probably considered the task nothing more than another routine committee function. For whatever reason he may have joined the effort, every member of every utilization-review committee is serving a single common purpose. It is a purpose as alien to the image of the physician as it is irrelevant to the welfare of his patients. It is a purely pecuniary purpose.

Couched in moralistic expressions of pseudo-altruism, the utilization-review committee charter presents an appealing deception. "The purpose of the committee," it is usually stated, "will be to prevent . . ." followed by a number of specifications, all designed to invoke the images of motherhood, virtue and patriotism. Utilization-review committees are needed, it is argued, to conserve our health care resources.

In the ultimate analysis, however, utilization-review committees provide consensus pressure which can be used by hospital administrators and fiscal agents in exercising control over every member of the professional staff of the hospital. Although rarely em-

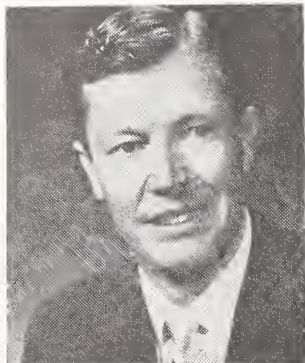
powered to initiate or exercise disciplinary actions, such committees can, through their periodic reports, recommend disciplinary and punitive measures. The utilization-review concept is one which creates a process for peer sanction or condemnation of the physician's practices regarding his patient's length of stay in the hospital.

All of the platitudes notwithstanding, the primary if not the only real, motivating purpose of the utilization-review committee is a mercenary one. Physicians who work on these committees are, in truth, working for the fiscal interests of third parties. They are substituting for an honest, forthright and direct understanding between physicians and patients, underwriters and policy holders, governments and taxpayers. In brief, they are frustrating the truth and obscuring the vision so desperately needed in the prevention of this vast delusion wherein the physician is always the culprit.

Finally, in accepting the utilization-review committee as a legitimate and ethical member of the family of hospital organizations, we embrace a dangerous tenet, namely that a physician's decision concerning the appropriate time for dismissal of his patients from the hospital should be subjected to peer review. If such a tenet is valid then, with even more persuasion, the physician's decision concerning his patient's need for hospitalization should also be subject to review by his peers. In effect, physicians should be required to obtain an approval from some peer group . . . perhaps a "pre-utilization-review committee," prior to hospitalizing certain, specified cases.

Maybe someone has already thought of that. *MRJ* □





Utilization review is a subject we will hear much about in the near future. The AMA has proposed a peer review system, PRO, to deal with it and so has Senator Bennett of Utah, with his PSRO.

Emerson once wrote concerning the insanity of conceit and these thoughts might well be applicable to our present thinking. I believe it is safe to assume that a peer review system suggested by Senator Bennett's amendment would most certainly completely fragment our society. I also believe that Congress intends to act upon some proposal to curb what it terms excess use of hospital and extended care facilities. They say they intend to cut admissions by at least 20 percent.

Congress was no small amount disturbed by the staff report to the Senate Finance Committee in regard to the overwhelming costs of the Medicare program. While the AMA had predicted a figure very close to the actual cost of the program, and while HEW *et al.*, had deliberately whittled that figure to sell the program back in 1964, medicine (not Congress) was to be the scapegoat. While professional fees have come under some scrutiny, Congress, I believe, recognizes that institutional costs and not professional fees are taking the greater toll.

Since institutional utilization is always wholly under physicians' control any attempt to control utilization must necessarily have

a direct effect on our professional freedom.

Here we stand at the crossroads; to abdicate responsibility seems not only poor professionalism but poor citizenship. The phrase of Times quoted to us "Do it yourself or it will be done for you" only arouses more indignation.

We do not have as many friends in Congress as we once had so it's time we did some hard non-conceited thinking. As some members are prone to advise, "when Medicare gets sufficiently restrictive let's withdraw from participation" would seem to be the only other alternative, but I do not envision a mass exodus. Every doctor is not so philosophically attuned. When Medicare passed the Oklahoma State Medical Association strongly advised direct billing and gave its reasons, yet about half of our 2,000 members immediately joined the march of filing government claims and others have joined the ranks in the meantime.

Your Board of Trustees is now seriously considering what position we shall take in trying to determine our course of action. We contend that Oklahoma problems are unique to Oklahoma and not applicable to any other state's responsibilities. I do, however, think we will have to do some bargaining or we will find our hospital admissions reviewed by laymen with very little knowledge of such matters.

We surely must benefit from past mistakes and face these problems very objectively. We are open for sound, sage suggestions from the members of Oklahoma State Medical Association. □

Sincerely and fraternally,

*E. L. Carlson M.D.*



# Geographic and Secular Variation in Mortality From Malignant Disease in Oklahoma, 1956-1965

NABIH R. ASSAL, Ph.D.  
ROBERT D. LINDEMAN, M.D.

*A counterbalance between a decrease in deaths from leukemia among the very young and an increase in mortality among the very old resulted in a constant age-adjusted death rate over the ten year period studied in Oklahoma.*

## IV. Cancer of the Haematopoietic System (ISC 200-207)

### INTRODUCTION

IN RECENT YEARS, epidemiologic evidence has accumulated implicating chromosomal aberrations, ionizing radiation and viral infections as possible determinants in the genesis of malignancies of the haematopoietic system. Identification of "clusters" of a specific malignancy often has provided the initial clue leading to recognition of a correlation between some host or environmental factor and an increased incidence of the disease. Hopefully, recognition of geographic and secular "clusters" of increased mortality in the state of Oklahoma might initiate the studies which would further sup-

port previous correlations or perhaps even identify new determinants of a specific malignancy.

### LEUKEMIA

The international classification of diseases used in coding death certificates lists leukemia under five histologic types, namely acute and chronic lymphocytic, acute and chronic myelocytic and monocytic leukemia.<sup>18</sup> Acute leukemia occurs mainly in children while chronic leukemia affects older persons. The age frequency pattern varies with the histology. Lymphatic leukemia shows a bimodal distribution, a childhood peak and an adult peak. Myeloid leukemia shows a peak in childhood and in middle age, while the age peak for monocytic leukemia is around 30 years of age.<sup>5, 17, 37</sup>

Mortality rates for all types of leukemia are higher in males than females and in whites than non-whites in all age groups.<sup>5, 10</sup> The increase among males over females is most apparent for the chronic lymphatic leukemias seen in older age groups.<sup>9</sup>

The adjusted death rates for leukemia among the United States white males has increased from three per 100,000 in 1930 to seven per 100,000 in 1965. Among white females the increase was from two to five per 100,000. The rates appear to have stabilized over the last few years.<sup>23</sup>

High age-adjusted mortality rates for leukemia were found in New York, Minnesota

From the Department of Biostatistics and Epidemiology, University of Oklahoma School of Health, Oklahoma City, Oklahoma.



and California.<sup>34</sup> It is interesting to note that these are all states with a high density of physicians suggesting a possible explanation might be increased diagnostic efforts. Variations between states with high mortality and those with low mortality were due primarily to differences in older age groups.<sup>34</sup>

The variation in adjusted leukemia mortality among 24 countries was considerably smaller than for malignancies of other sites. Only a two-fold difference in leukemia mortality between the countries with the highest and lowest rates was observed; for other common malignancies, there was as much as a six-fold difference. Chile and Japan had the lowest mortality rates for both males and females in 1962-3; the United States males and Israeli females had the highest rates.<sup>26</sup> Variations in mortality from leukemia were more striking in the older age groups.<sup>26</sup> Most striking was the decrease in mortality from lymphatic leukemia in older persons in the Oriental countries.<sup>19</sup>

Age-adjusted leukemia death rates among immigrant populations to the United States generally were high, and comparable to the rates of the United States white males rather than the rates seen in the country of origin.<sup>19, 27, 35</sup> In Austrian and Irish immigrants, mortality rates actually exceeded those of United States white males primarily because of an increase in the older age groups. Only immigrants from the United Kingdom experienced rates more comparable to their native country than the U. S. white male population.

A higher mortality rate exists in Israel among native born and European immigrants than among those of African or Asian origin.<sup>6</sup> In Brooklyn, Jewish males had a two-fold increase in mortality rates over non-Jewish males.<sup>22</sup>

An increased incidence of leukemia in mongoloid children has been recognized.<sup>7, 24, 25</sup> Furthermore, an extra chromosome (Trisomy 21) has been found in a large proportion of mongoloid children.<sup>7</sup> Since many leukemic children have chromosomal abnormalities which may even precede development of clinical leukemia, a good possibility exists that chromosomal aberration may play an

important role in the etiology of leukemia. Furthermore, an excess of leukemia has been reported in children of mothers 40 years of age and older.<sup>30, 31</sup> These are the same age groups of women which have an increased incidence of mongolism.

Familial aggregation of leukemia has been reported.<sup>25</sup> Whether there is a genetic determinant of leukemia or whether there is an increased frequency of chromosomal aberrations in some families which leads to an increased incidence of leukemia remains undetermined.

Henshaw and Hawkins reported a leukemia death rate among physicians almost double that of the adult white male population.<sup>15</sup> Ulrich reported that radiologists experience a nine-fold increase in leukemia mortality over all other physicians.<sup>32</sup> Even when age-adjusted rates are calculated, rates are still three times higher than for other physicians.<sup>25</sup> This increased mortality in radiologists has been attributed to an increased exposure to x-ray.

Further evidence that x-ray exposure may increase the risk of leukemia has been found in other studies. In Britain, patients with ankylosing spondylitis receiving x-ray therapy show an excess of leukemia deaths over controls.<sup>5</sup> Mothers of leukemic children reported twice as much diagnostic radiation exposure to the abdomen during pregnancy as the mothers of controls.<sup>31</sup> After the atomic explosions in Hiroshima and Nagasaki, the Atomic Bomb Casualty Commission was established to study the delayed effects of radiation on survivors. A peak leukemia incidence was reached six or seven years after the atomic explosions.<sup>16</sup>

Reports on leukemia clustering have been numerous with up to eight cases reported in some clusters.<sup>13</sup> One of the largest clusters is that reported by Heath, *et al.*, describing eight cases of childhood leukemia in Nile, Illinois. Three of the affected children and the siblings of several others attended the same high school. This existence of clusters of leukemia along with the success achieved in identifying viruses that are leukemogenic in laboratory animals has led to a popular hypothesis linking leukemia with a viral infection.<sup>19</sup> Evidence of a viral etiology in human leukemia, however, remains inconclusive.<sup>25</sup>



Hodgkin's disease, lymphosarcoma and reticulum cell sarcoma are three malignancies with distinct histologic characteristics involving the lymphatic system. In 1968, lymphosarcoma and reticulosarcoma caused 7,900 deaths in the United States while Hodgkin's disease caused 3,500 deaths.<sup>1</sup> For each of the lymphomas, males had higher mortality rates than females and whites had higher rates than non-whites.<sup>21</sup> These sex and race differences were more evident in the older age groups.<sup>21, 33</sup> Hodgkin's disease is reportedly one and one-half times more frequent among Jewish than among non-Jewish populations.<sup>21</sup>

Hodgkin's disease has several epidemiologic features which make it the most interesting lymphoma for study. MacMahon<sup>21</sup> showed a bimodal age-specific incidence curve with one peak in the 25-29 age groups and another peak at 70-74. International death rates for fifteen countries reported by the World Health Organization<sup>36</sup> also showed a bimodal mortality curve for Hodgkin's disease. Cole found that the mortality rates from Hodgkin's disease in the southern United States among the middle-aged and elderly were comparable to those observed in the rest of the country; however, the mortality among young adults was only one-half that observed in the rest of the United States.<sup>4</sup> These findings suggest that Hodgkin's disease may be two distinct clinical entities with similar histological manifestations. Another possibility is that more than one environmental or host determinant is present which is capable of increasing the risk in these separate age groups.

MYELOMA

Little is known about the epidemiology of multiple myeloma. In 1968, 3,900 deaths from multiple myeloma were reported in the United States.<sup>1</sup> More deaths occurred among males than females. The death rates are slightly higher in white males than non-white males, but females of the two races had equal rates. The highest death rates were reported in the 70-74 age group for both males and females. There has been no

appreciable change in mortality rate with time.<sup>1</sup>

The purpose of this fourth report is to make observations on the mortality from cancer of the haematopoietic system occurring in Oklahoma between 1956 and 1965 and to determine if geographic and secular clusters of disease can be identified to stimulate further epidemiologic investigations.

METHODS AND PROCEDURES

Mortality data were obtained from death certificates filed in the Office of Vital Statistics, Oklahoma State Health Department. Information from all resident death certificates from malignancies filed between 1956 and 1965 was transferred to IBM cards for tabulation.

Deaths from malignant disease were subclassified by sites of involvement using the international statistical classification (ISC) of disease code revised in 1955.<sup>18</sup> The data in this report include an analysis of malignancies of the haematopoietic system involving the following:

ISC Code	Malignancy
200	Lymphosarcoma and Reticulosarcoma
201	Hodgkin's Disease
202, 205-6	Other lymphomas, Mycosis Fungoides
203	Multiple Myeloma
204	Leukemia, Aleukemia

The data were grouped into two five-year periods (1956-60, 1961-65) to establish secular trends, by sex and race (whites, non-whites) and by age (<5, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75+) to quantify age-sex-race specific death rates and by county to establish geographic distribution. The Oklahoma resident population by age-sex-race and county was estimated for the mid-point of each five-year period from 1950 and 1960 censuses.

The direct method of adjustment,<sup>14</sup> using the 1960 Oklahoma white male census as the standard, was utilized to calculate age-sex-race adjusted death rates per 100,000 population for the 77 Oklahoma counties for the two five-year periods. The average annual age adjusted death rates for the entire ten year period were tabulated by county and plotted on Oklahoma maps.

Ideally, we would like to determine if the disease frequency formed patterns of irregular distribution (clustering) or was random-



ly distributed within the state. Therefore, based on the mortality rate for each malignancy by site of involvement, the 77 Oklahoma counties were divided into four quartiles. Three or more adjacent counties in the highest or lowest quartiles were examined as a "cluster." The presence of geographic clustering was also tested by the Kendall method<sup>28</sup> by determining the similarity between male and female death rates by county.

Counties in the state were designated as (1) metropolitan, if the county contained a major city with a population over 30,000; (2) non-metropolitan, if the county contained a major city with a population between 15,000 and 30,000; or (3) rural, if the county did not contain a major city with a population of at least 15,000, in order to examine differences in mortality between urban and rural areas. Based on the 1960 Oklahoma census, 10 counties are classified as metropolitan; 17 as non-metropolitan; and 50 as rural. To ascertain if significant differences in mortality existed among the three urbanization classes, the white male and female average annual age-adjusted death rates by county were ranked and tested by the Kruskal-Wallis rank test.<sup>28</sup>

The socioeconomic distribution of Oklahomans by county of residence was also de-

termined through an index utilizing the major determinant of socioeconomic status, mainly: (1) the average per capita income, (2) educational level, (3) condition of housing, and (4) the number of persons per 100,000 receiving aid to dependent children (ADC).

RESULTS

Leukemia was the most common malignancy reported involving the haematopoietic system. It was the fifth leading cause of cancer deaths in white males, ninth in white females, eighth in non-white males and twelfth in non-white females. The lymphosarcoma-reticulosarcoma group was the next most common malignancy ranking between 12 and 15 out of 34 specific sites as the most frequent malignancies in the four sex and racial groups. Other types of malignancies involving the haematopoietic system were even less frequent. (Table 1)

Age-adjusted death rates for malignancies involving the haematopoietic system in the white population showed little change between 1956-60 and 1961-65 with one exception. An increase in the frequency of multiple myeloma has been reported in both males and females. The rates among the non-whites generally are inconsistent because of the small number of deaths so that no defi-

Table 1  
Cancer Deaths by Specific Site, Haematopoietic System  
Oklahoma (1956-1965)  
(Numbers in Parenthesis Indicate Order of Rank)

Cancer Site	White Males	White Females	Non-white Males	Non-white Females	Total
Lymphosarcoma Reticulosarcoma (ISC 200)	421 (12)	317 (13)	27 (14)	19 (15)	784 (15)
Hodgkin's Disease (ISC 201)	222 (17)	118 (23)	14 (20)	9 (21)	363 (24)
Other Lymphoma Mycosis Fungoides (ISC 202, 205-6)	59 (26)	48 (27)	6 (23)	6 (24)	119 (30)
Multiple Myeloma (ISC 203)	182 (21)	140 (21)	21 (16)	22 (14)	365 (22)
Leukemia, Aleukemia (ISC 204, 207)	1057 ( 5)	717 ( 9)	75 ( 8)	47 (12)	1896 ( 7)
Total (ISC 200-207)	1941	1340	143	103	3527



Table 2  
Age-Adjusted Death Rates of Cancer of the Haematopoietic  
System by Site, Sex, Race and Two Five-Year Periods

Cancer Site	Years	White Male	White Female	Non-white Male	Non-white Female
Lymphosarcoma and Reticulosarcoma (ISC 200)	1956-1960	19.4	12.2	14.4	13.8
	1961-1965	20.6	14.5	14.3	3.7
Hodgkin's Disease (ISC 201)	1956-1960	11.2	5.2	7.8	2.9
	1961-1965	9.9	5.0	7.4	4.6
Other Lymphoma Mycosis Fungoides (ISC 202, 205-6)	1956-1960	2.6	1.7	2.2	3.0
	1961-1965	2.8	2.2	4.0	2.7
Multiple Myeloma (ISC 203)	1956-1960	7.1	5.5	9.8	8.1
	1961-1965	10.1	6.0	12.4	13.1
Leukemia, Aleukemia (ISC 204, 207)	1956-1960	49.6	31.4	32.0	26.3
	1961-1965	50.9	29.9	41.9	17.9

nite trends can be ascertained for any specific site. (Table 2)

The average annual age-specific death rates for the ten year period studied indi-

cate an increase in death rates with age for all sites of the haematopoietic system. There also was an early peak in leukemia deaths in the population under five years of age.

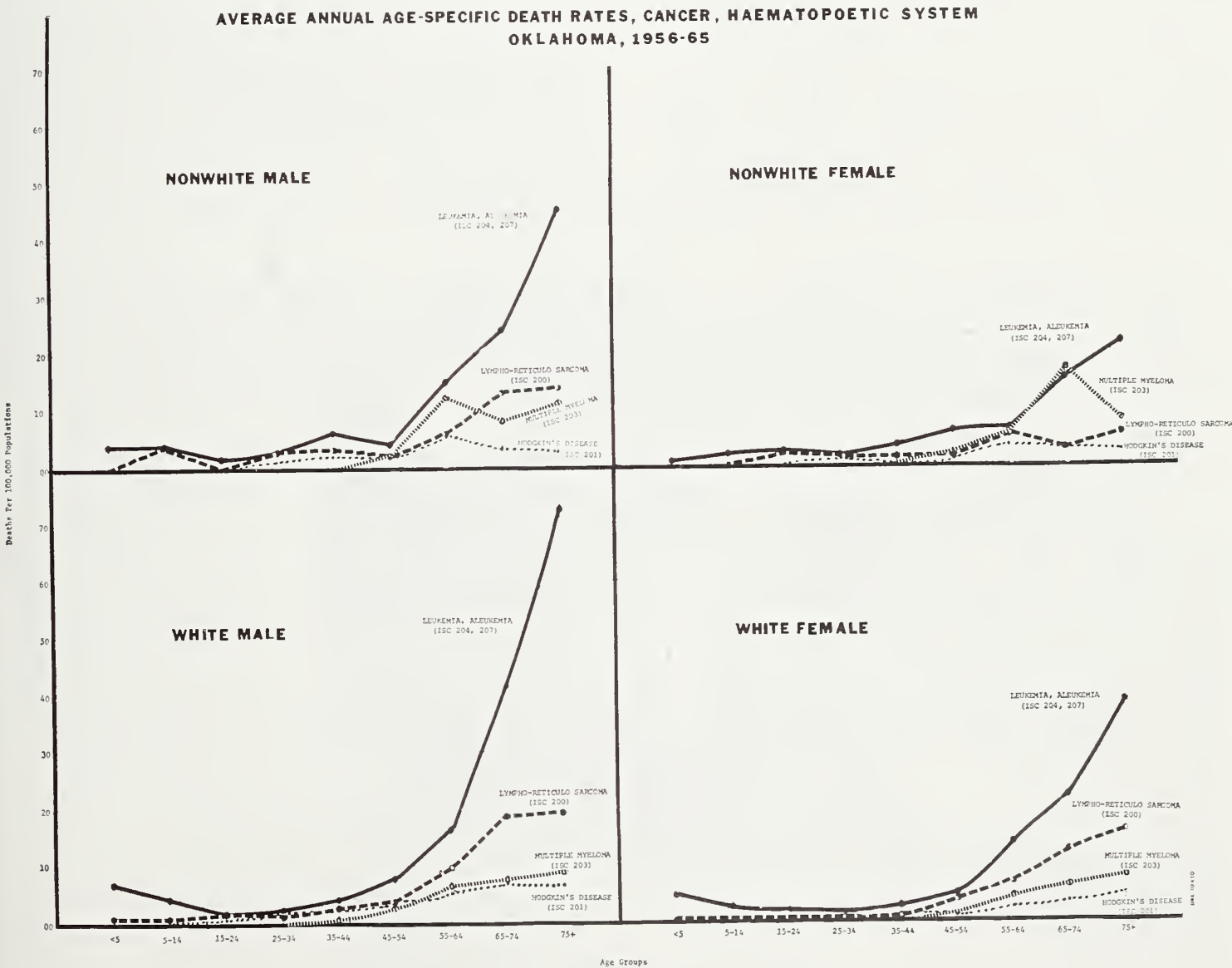


Figure 1  
Average Annual Age Specific Death Rates by Sex and Race, (1956-1965).



The white rates are higher and more consistent than in the non-whites for both sexes. (Figure 1) Multiple myeloma is unique among cancers of the heamatopoetic system in that no deaths were reported in Oklahoma in persons under age 35. Almost all of the deaths occurred in persons over age 45.

Mean average age-adjusted death rates for leukemia by county showed no correlation with degree of urbanization in white males. In contrast, white females residing in the metropolitan counties experienced significantly higher death rates (Chi-Square  $p < .05$ ) than white females residing in the non-metropolitan and rural counties. (Table 3) Correlation of average annual age-adjusted death rates between white males and females by county show a significant Z value ( $p < .05$ ) only for leukemia. (Table 4) Ratios of mean average annual age-adjusted death rates for males and females indicate an increase in deaths of males over females for both whites and non-whites in all sites of the haematopoetic system. (Table 5)

White male age-adjusted leukemia death rates appear to be randomly distributed throughout the state with two "cluster" areas, one in the western counties of Ellis,

Dewey, Custer and Roger Mills and another in the northwestern counties of Cherokee, Wagoner, Rogers and Nowata. (Figure 2) White females residing in counties in the southeastern part of the state appear to have an increase in mortality from leukemia over the rest of the state. (Figure 3)

Mortality from lymphomas by county appear to be randomly distributed through the state in white males. (Figure 4) In white females, there appears to be an increased frequency of lymphomas in northeastern Oklahoma with two cluster areas in this part of the state. (Figure 5) Deaths from multiple myeloma appear to be more prevalent among the white males residing in the western half of the state. (Figure 6) The distribution of female adjusted death rates of multiple myeloma appears random. (Figure 7)

DISCUSSION

The purpose of this study was to examine the mortality from cancer of the haematopoetic system occurring to Oklahoma residents from 1956-1965. Studies based on death certificates have their limitations, but are usually the best available data from which one can determine the epidemiology

Table 3  
Mean Average Annual Age-Adjusted Death Rates by Sex of White  
Population and Degree of Urbanization for Oklahoma  
Counties, 1956-1965

Cancer Site		Degree of Urbanization			Kruskal-Wallis Test Chi-Square Values
		Metropolitan	Non-metropolitan	Rural	
	Sex	Mean	Mean	Mean	
Leukemia	Male	9.8	9.7	10.3	5.42
	Female	6.7	5.9	6.0	6.43*

Chi-Square Values  
\*  $p < 0.05$

Table 4  
Correlation by County of Average Annual Age-Adjusted  
Death Rates for Oklahoma White Males  
and Females (1956-1965)

Cancer Site	Kendall Rank Coef.	Z
Hodgkin's Disease	0.07908	1.017
Lymphoma and Reticulosarcomas	0.11418	1.469
Others, Lymphoma	0.01309	0.168
Multiple Myeloma	-0.06192	0.796
Leukemia	0.20641	2.656*

\*  $p < 0.05$







Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

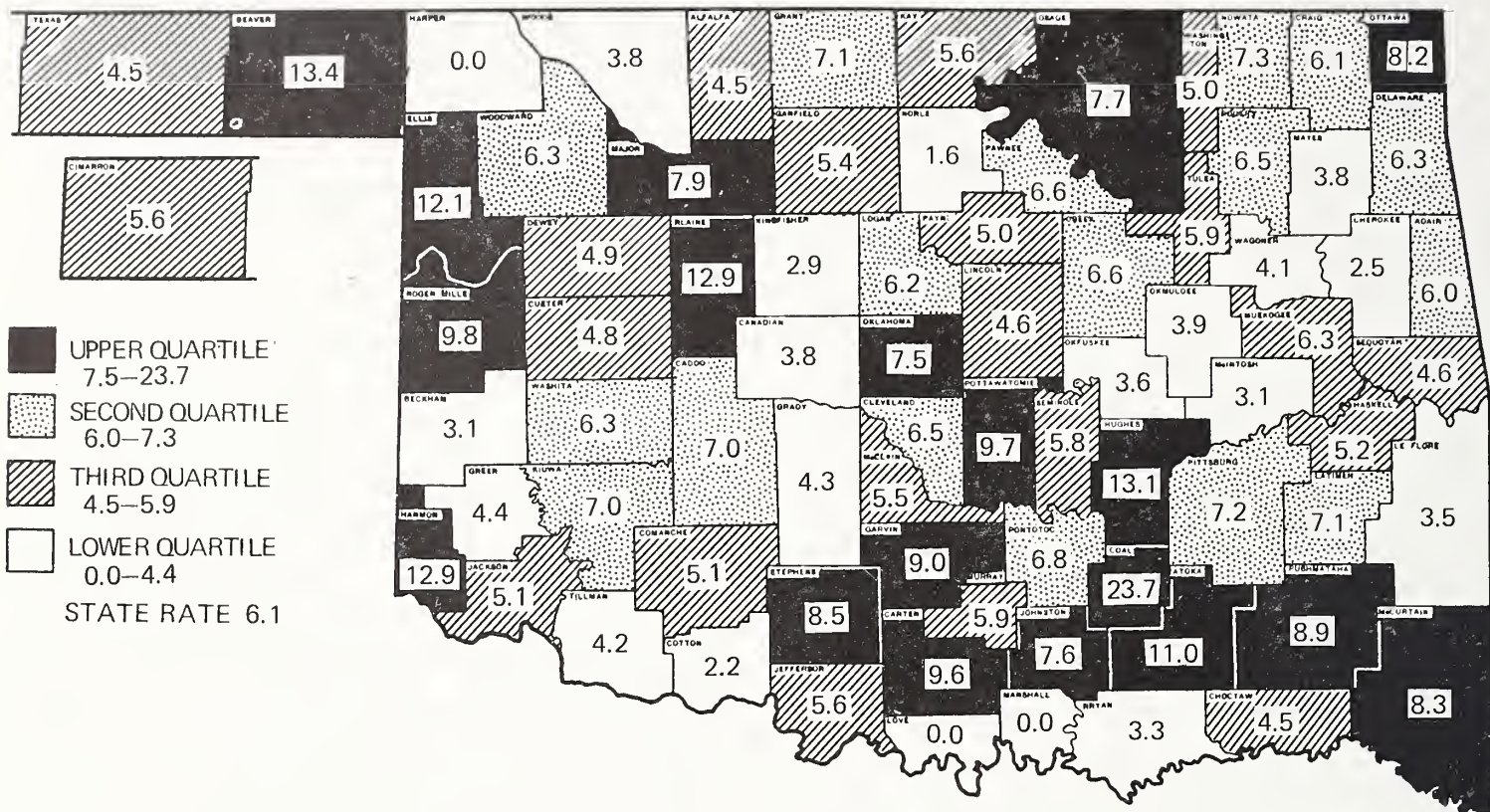


Figure 3  
Average Annual Age-Adjusted Death Rates for Leukemia and Aleukemia  
(ISC 204), White Females.

Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

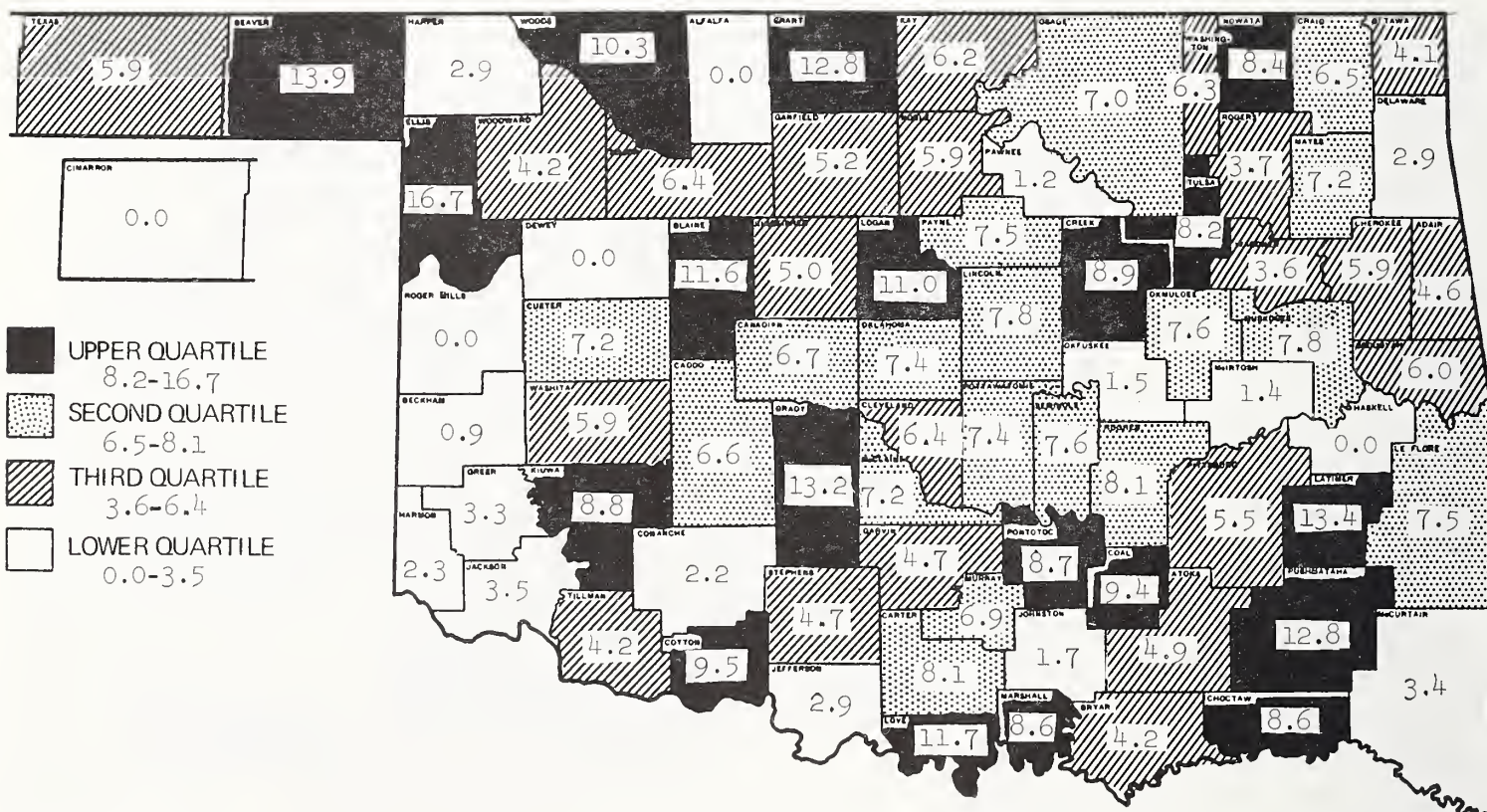


Figure 4  
Average Annual Age-Adjusted Death Rates for Lymphomas (ISC 200-202, 205),  
White Males.



Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

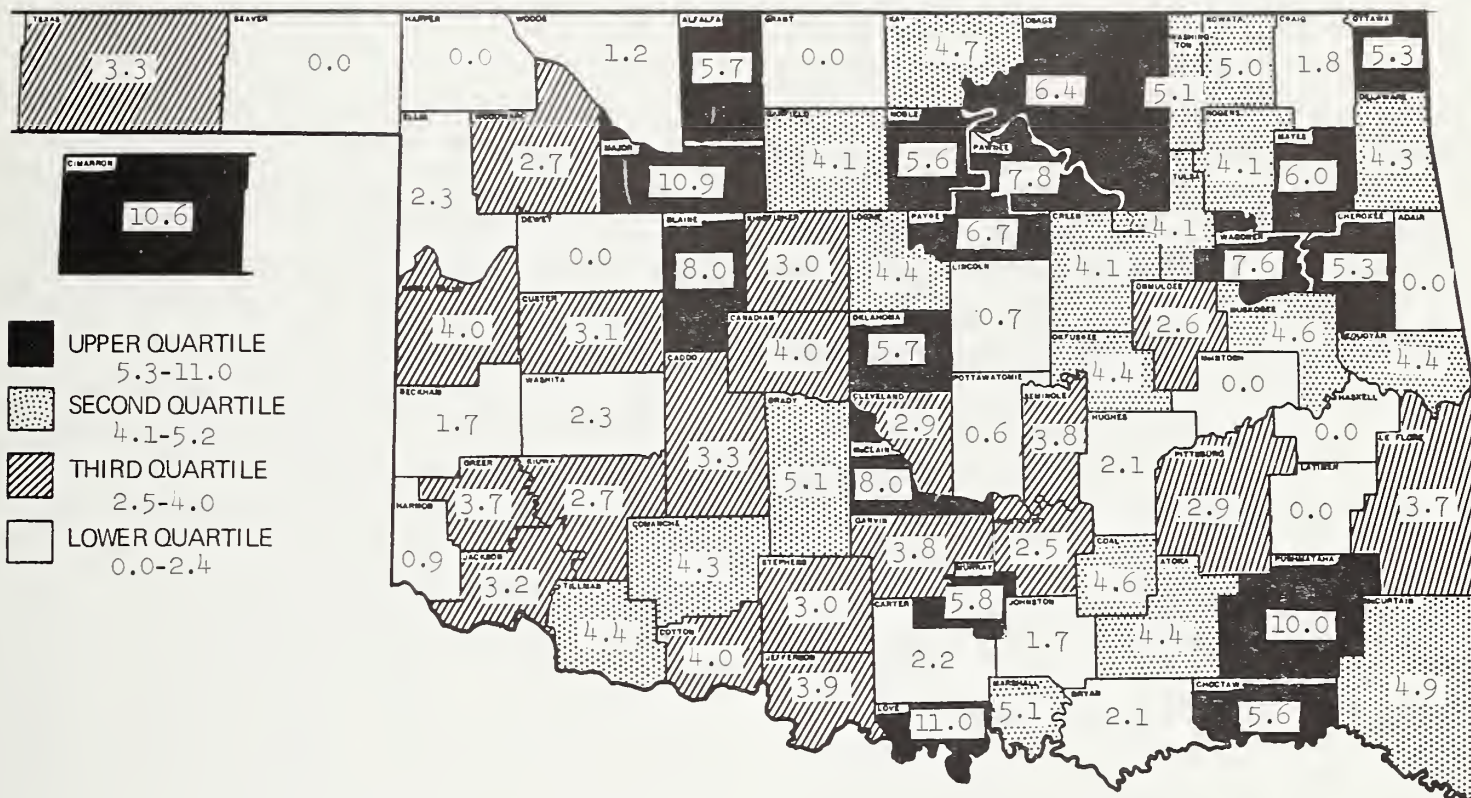


Figure 5  
Average Annual Age-Adjusted Death Rates for Lymphomas (ISC 200-202, 205),  
White Females.

death rates from leukemia were observed during this time interval in the very young

while an increase was noted in the older groups. Minnesota reported similar trends.<sup>23</sup>

Average Annual Age Adjusted Death Rate  
Oklahoma, 1956-65  
Rates Per 100,000 Population

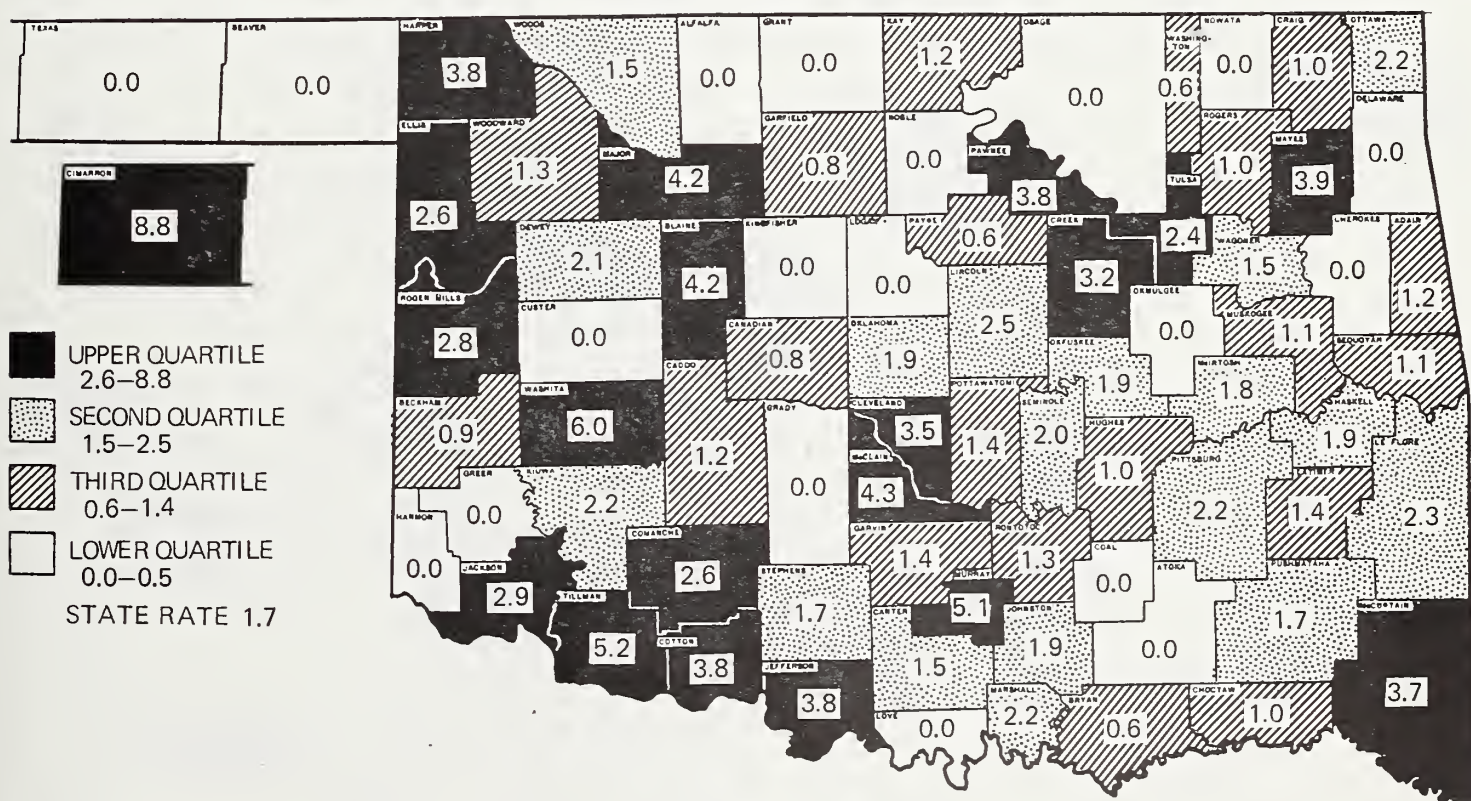


Figure 6  
Average Annual Age-Adjusted Death Rates for Multiple Myeloma (ISC 203),  
White Males.



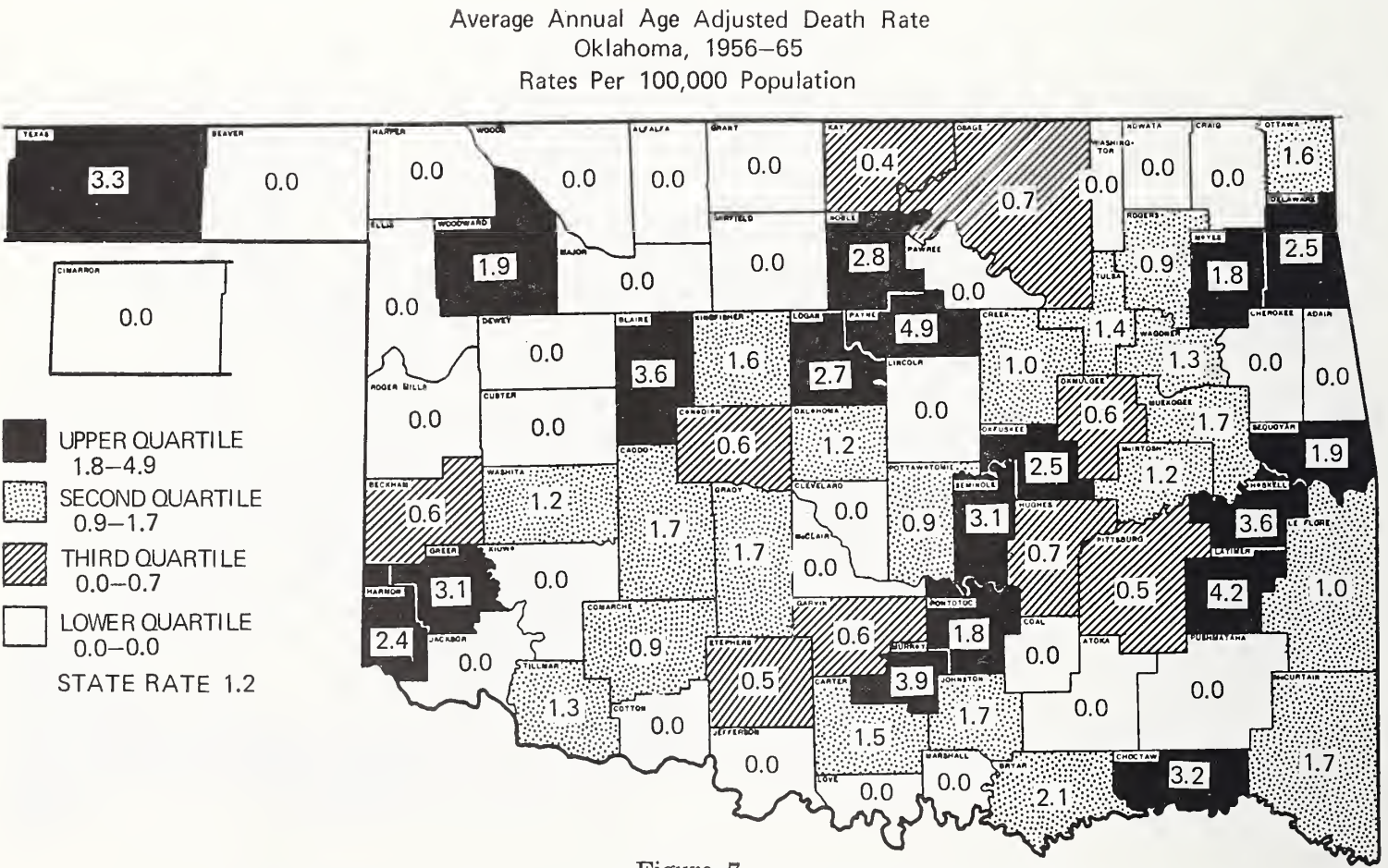
Although substantial changes in age-specific death rates occurred in these very young and older age groups over this time interval, these changes counter-balanced each other so that age-adjusted death rates remained constant.

The reasons for the decline in leukemia death rates in the very young are not readily apparent. One possible explanation is that there has been a decline in exposure to some environmental factor such as radiation exposure. Use of x-ray for diagnosis in pregnant females and newborn infants has certainly declined with the recognition that infants of women receiving diagnostic x-rays during pregnancy have a higher incidence of leukemia. Another possible explanation is that advances in cancer chemotherapy, better treatment of infection and other improvements in treatment of these patients with such things as platelet transfusions has made it possible for more of these patients to live into older age groups.

Correlation between male and female annual age-adjusted death rates by county showed a significant Z value only for leu-

kemia. This suggests that an environmental determinant might exist in counties with increased mortality from leukemia. [When one is using a large sample size (77 counties), a significant Z value is more easily obtained than when a smaller sample size is subjected to statistical analysis. This may explain the significant Z value for leukemia (2.655,  $p < 0.005$ ) even though the Kendall rank correlation coefficient was small (0.2064)]. Another factor which may play a role in obtaining a high correlation between males and females by county is that physicians' acuity and diagnostic facilities may vary considerably from county to county. It would not be surprising then to see a higher incidence of leukemia for both males and females in counties with better diagnostic facilities. Nevertheless, the failure to see significant correlations between males and females by county in other malignancies of the haematopoietic system suggests that an environmental factor may be present influencing the leukemia mortality rates in both sexes.

Although no striking geographic or urban-rural differences in leukemia mortality were seen in white males, it would appear that





white female leukemia mortality was increased in the southeastern part of the state. There also was a significant increase in leukemia mortality in white females in urban over rural counties.

Deaths from lymphomas were examined separately by histologic classification and as a composite of all lymphomas. Here again, no secular trends could be defined even though some variation in age-adjusted death rates existed in the separate sex and racial groups. Even though age-adjusted mortality rates remained constant, examination of age-specific death rates show that rates decreased in the younger age groups and increased in the older age groups. The same explanation for this phenomenon can be offered that was described in discussing this finding in leukemia mortality.

Age-adjusted death rates in both whites and non-whites show an excess in mortality for males over females in each of the malignancies involving the haematopoietic system. This is most impressive in patients with

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Hodgkin's disease where the male rate is more than double the female rate. In other malignancies the mortality rates in males was usually 50 percent above that of females. Environmental factors such as occupational exposure to radiation may be important in increasing the risk in males. If this were true, the male to female differences should be greater in the adult population than in the very young. This was not true. Another possible explanation that deserves further exploration is that some genetic determinant, such as chromosomal aberrations involving the sex chromosome, may be responsible for the differences.

Mortality trends for multiple myeloma are unique among malignancies of the haematopoietic system in Oklahoma as these are the only malignancies showing an increase with time in all sex and racial groups. Almost all of the deaths occurred in the 45 and older age groups. The increases in mortality in these older patients actually paralleled quite closely the increases in leukemia and lymphoma mortality in the older patients. Unlike leukemia and lymphoma, there was no decrease in the mortality in younger age groups to counterbalance this increase and maintain a stable age-adjusted rate.

The most apparent geographic differences in age-adjusted mortality rates were those observed for multiple myeloma in white males. This malignancy appears to be more prevalent in the western counties of the state. This pattern was not present in white females, however. Whether this increase in death rates from myeloma or the apparent prevalence of myeloma in white males in western counties is real or merely a reflection of improving diagnostic facilities is not known. The latter may well be the explanation.

#### SUMMARY

Deaths from cancer of the haematopoietic system occurring to residents of Oklahoma from 1956-1965 were analyzed. Age-specific death rates and age-adjusted rates were quantified for the two five year periods by sex and race. An average annual age-adjusted death rate by county was tabulated and plotted on Oklahoma maps.

The adjusted mortality from most sites of



cancers of the haematopoietic system remained constant from 1956-60 to 1961-65 except for multiple myeloma where an increase has taken place. It would appear that the constant adjusted rate for leukemia and lymphoma resulted from a counterbalance between a decrease in deaths in the very young and an increase in mortality in the old.

Males experienced an increase in mortality over the females for all sites. The geographic distribution of adjusted mortality appears to be random for most groups except for the white female leukemia deaths and for white male multiple myeloma deaths. An increase in white female leukemia mortality was noted in urban over rural counties. □

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CONSUMERS REJECT CHIROPRACTIC

A national consumer group has urged the Senate Finance Committee "to reject the inclusion of chiropractic services under the Medicare, Medicaid, and all other federally supported health programs at this time." The Consumer Federation of America, which represents 184 local, state and national consumer organizations, said it is "gravely concerned that Medicare coverage of chiropractic services would needlessly expose benefi-

ciaries to potential health hazards—particularly the harm which would result when beneficiaries treated by such practitioners delay or avoid seeking proper medical care." In a resolution adopted last month at its annual meeting, the CFA also said that "studies of chiropractics have not produced evidence of the scientific validity of chiropractic theory and practices." □



# Psychiatric Emergencies in Medical Practice

## Survey of the Literature and Some Proposals

THOMAS N. RUSK, M.D.

*With the appropriate therapeutic attitude and informed use of talk, environmental manipulation and chemotherapy all physicians can effectively manage psychiatric emergencies.*

### I. INTENT

IN THIS PAPER I intend to review some pertinent literature on psychiatric emergencies. I will also propose some recommendations of my own for the definition, assessment and management of the patient or family in crisis. The paper is organized as follows:

- II. Definitions and Classification
  - III. Theoretical Framework
  - IV. Incidence
  - V. General Principles of Management
    - A. Assessment
    - B. Therapeutic Approach
    - C. Treatment Modalities
      - (1) Talk
      - (2) Environmental Manipulation
      - (3) Drugs (Chemotherapy)
  - VI. Management of Specific Emergency Situations
    - A. Social
    - B. Personal
  - VII. Summary
- ### II. DEFINITIONS AND CLASSIFICATION
- There is no commonly accepted definition

of a psychiatric emergency. Garetz<sup>1</sup> gives three necessary and sufficient criteria that define a medical emergency. He adds the fourth to apply to psychiatric cases only. They are the existence of a condition, injury or disease:

- (1) that has appeared suddenly or unexpectedly,
- (2) that requires immediate medical attention to prevent serious damage,
- (3) for which there is a known and available form of treatment that offers the possibility of minimizing or preventing damage, and
- (4) there is no contraindication to seeing or treating the patient on an emergency basis.

The latter covers those immature, impulsive, manipulative individuals who consistently set up chaotic situations. This chaos often demands the urgent involvement of a whole group of people. Interventions here characteristically solve nothing, simply encouraging the instigator to initiate more of the same in the future.

The *Psychiatric Emergency*,<sup>2</sup> a publication of the American Psychiatric Association, yields a number of definitions, some of which add other dimensions. A psychiatric emergency is "any problem that any referring source (minister, doctor, or other person) feels incapable of handling for even a few hours beyond the time of contacting professional help."<sup>2</sup>(p10) The same publication quotes Doctor Abraham Miller: "A psychiatric emergency is any individual who develops a sudden or rapid disorganization in



his capacity to control his behavior or to carry out his usual personal, vocational and social activities."<sup>2</sup>(p11)

These last two definitions speak to some specific aspects of psychiatric emergencies—that is, the social and intrapsychic determinants emphasized by Frazier.<sup>3</sup>

My own definition begins with that given by Webster's Seventh New Collegiate Dictionary: "An emergency is an unforeseen combination of circumstances or the resulting state that calls for immediate action." The circumstances that call for immediate action can be grouped into two categories:

(A) *Social*

There is a loss of control of behavior, especially if manifested by destructive action toward self, others or property; or the threat of such loss of control as perceived by self and or others.

(B) *Personal*

A critical stage exists in the process of an individual's mental or emotional coping with the world, which if allowed to progress without external intervention, will result in significant avoidable impairment of well-being.

Examples of the first group include those kinds of behavior most consistently accepted as a psychiatric emergency—that is, suicidal, homicidal, assaultive and destructive behavior. Whether anxiety, panic or bizarre behavior are so classified depend on the degree to which they evoke concern in the subject or observers.

The second group falls within a frame of reference more closely allied to the medical model and the Garetz definition. In here are included preschizophrenic panic, school phobias, marital crises and the life crises outlined by Caplan<sup>4</sup> among others,<sup>5</sup> such as promotion, job loss, death of a loved one, post partum and menopausal depressions, etc. These may not evoke sufficient acute concern in the individual involved or those about him to bring him to emergency care; yet, if not dealt with promptly can lead to severe crippling disability. Lindemann,<sup>6</sup> in his classic paper on the complications of unresolved grief and Shneidman, in comments he has made on the serious psychologic complications occurring in those who survive

the patient who has committed suicide, speak to this point. The informed nonpsychiatrist can be of immense help preventing serious psychiatric disability in this latter group.

Specific examples, their management and pertinent references appear in the final section of this paper.

### III. THEORETICAL FRAMEWORK

Engel and Romano<sup>7</sup> in an excellent, but largely ignored paper, described clinical and EEG correlates of delirium. They defined it as "a syndrome of cerebral insufficiency." They explain that "as with the more familiar types of organ (liver, kidney, etc.) insufficiency," the function of the organ as a whole is impaired.

I would like in an analagous way to define ego insufficiency as a failure of mental and emotional coping processes to deal with the psychosocial world, that is, both intrapsychic and interpersonal demands.

Ego here refers of course, not to pride or self-esteem, but to the executive, administrative or computer aspect of the mind. This includes perceptual, cognitive, emotion controlling, reality testing and interpersonal relating processes.

Included among the ego insufficiencies are the organic disorders described by Romano and Engel, as well as the "functional" states of ego insufficiency seen in schizophrenia, depressions, manic states, panic, etc. All psychiatric disorders, in fact, can be conceptualized as qualitatively and quantitatively differing ego insufficiency states.

The subjective experiences associated with ego insufficiency are anxiety and depression. In other words when the person's ego is unable to cope with a current situation, anxiety and/or depression is experienced. Anxiety is the subjective experience associated with a threat to the ego's maintenance of homeostasis,<sup>8</sup> while depression reflects the ego's resignation to the failure to satisfy its goals.<sup>9</sup> (Although they are generally found together, I will refer to anxiety alone for the remainder of this section.) Sufficient stress can precipitate a total disintegration of the personality. At lower levels, anxiety is experienced as an overwhelming fear of loss of control ("I'm afraid I'm going crazy," "I'm afraid I'm going to die.")

One can conceptualize a family ego where-in the family is seen as an integral albeit



open system with a shared executive function.<sup>10</sup> If this family ego is insufficient to deal with a stress (for example: An unmarried daughter's pregnancy), then anxiety will supervene. Langsley discussing this system model of the family notes that any or all of three assumptions are made in family-oriented crisis treatment.<sup>10(p10)</sup> The first assumption states that the illness and the symptoms of a family member are in part an expression of family conflicts. An individual in a state of crisis may be expressing an upset or disequilibrium within the family as a social unit. An alternative view would be that the individual is being "scapegoated" and is expressing the upset of the entire family. A third point of view would be that the individual state of adaptation and equilibrium of any given family member depends upon reasonable stability within the family as a social unit. When the family is upset, this acts as a stress on all members of that group. Any member of the family who is especially susceptible to stress by virtue of previous conflicts, ego weakness and lack of ability to master stress may then decompensate. This concept maintains that there is a direct relationship between the individual state of mental health and the degree of conflict or equilibrium in the family. It can be applied broadly to include kinship networks, schools, industries and the entire communities as well as the nuclear family and the psychiatric hospital.

The sequence is as follows: A stress or change occurs. (Father and son living together are joined by an 18-year-old daughter who has lived with divorced mother for the past four years; brother becomes jealous of sister, since he has never before had to share father's attention. Father becomes enamored of daughter, not entirely in a paternal way.)

The individual and shared egos focus their

capacities in order to cope with the change. If the egos are strong, adaptive, even creative, solutions are possible. This results in a higher level of ego functioning subsequent to the stress. If ego insufficiency manifests itself, anxiety occurs and solutions learned earlier in life, less oriented to the current reality, are attempted (regression). Regressive behaviors possess little promise of effecting satisfactory solutions. Anxiety (a stress itself) increases, making loss of control even more likely. It is this loss of control, or the threat thereof and the concomitant maladaptive regressive coping behaviors that constitute psychiatric emergencies.

(The example family's ego has been largely dependent on father for problem solving. He is a schizophrenic in remission with impaired ability to discriminate between reality and fantasy, along with poor emotional control.)

(The father becomes increasingly anxious, cannot work, is irritable at home. Son becomes sullen, truant from school and upsetting to school authorities. Father, hallucinating, is brought by family to the physician because his "illness has come back.")

This concept of ego insufficiency directly suggests what role the physician should play in the emergencies covered in the later section on management. Suffice it to note that where the individual or family ego is insufficient that of the physician must intervene in one or a combination of three ways. Either he attempts to diminish the stress, (environmental manipulation), to strengthen the patient's or family's ego (crisis psychotherapy), or to artificially diminish the anxiety and/or depression (drugs).

#### IV. INCIDENCE

It is always extremely difficult, if not impossible, to find accurate data on the incidence of clinical phenomena in private practice. This problem is multiplied with events such as emergencies which are not disease entities, but rather a mode of presentation for treatment.

There is substantial data on the number of psychiatric cases presenting to emergency rooms of general hospitals. The incidence of primarily psychiatric cases has been variously reported from 1.4 percent to 6.6 percent.<sup>11, 12, 13</sup> Bellak,<sup>14</sup> *et al*, (1964) reported that as many as 50 percent of patients at-

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tending an emergency clinic were suffering a diagnosable psychiatric condition, either directly related to the presenting somatic complaint or independent of it.

Even in emergency rooms there are no reliable data on the number of actual psychiatric emergencies.<sup>15</sup>

Blackwell and Mallett (1964)<sup>12</sup> found that 43 percent of psychiatric patients presenting to an emergency room presented with physical complaints.

One study of general practice in Britain<sup>16</sup> showed that ten percent of patients were significantly psychiatrically ill and one percent were seriously disabled. Many would consider this an extremely modest estimate.

Doctor Anne Becker categorized the majority of psychiatric emergencies as comprising suicidal, acutely schizophrenic or decompensating alcoholic behaviors.<sup>2</sup> British workers<sup>17</sup> in a psychiatric emergency clinic found that 22 percent were psychotic, 59 percent neurotic and 11 percent personality disorders; figures similar to others<sup>18</sup> in a general emergency room. In American studies where organic brain syndromes are included and listed separately, Ungerleider<sup>19</sup> found that 40 percent were neurotic, 20 percent psychotic, 17 percent character disorders, ten percent acute brain syndromes, seven percent chronic brain and three percent situational reactions with three percent given medical diagnoses. Schwartz and Errera<sup>20</sup> found 32 percent were psychotic, 23 percent neurotic, 15 percent character disorder, 20 percent acute brain syndromes generally associated with alcohol. About 15 to 45 percent of patients seen as psychiatric emergencies in emergency rooms are admitted.<sup>5</sup>

Whether any of the data from emergency rooms are relevant to the private practice of nonpsychiatrists is open to serious doubt. Those presenting to emergency rooms are generally at the very lowest end of socioeconomic and educational ladder, a high ratio coming from minority groups.

This patient population is obviously not in any way comparable to that encountered in private practice.<sup>21</sup> The incidence of various kinds of psychiatric disorders varies greatly according to socioeconomic status.<sup>22</sup> For

example, schizophrenia and sociopathy are found more frequently in the lowest groups, psychosomatic disorder in middle range, while neuroses is predominant in higher groupings.

What impresses me about these data is the broad range of diagnostic categories seen. Some have attempted to list the multitude of diagnostic categories or major behavioral manifestations. Frazier<sup>3</sup> uses four behavioral categories: Anxiety, confusion, psychotic states and violence, but doesn't proceed to predicate management on the basis of this classification. The APA study notes that depression was the primary symptom in 67 percent, while anxiety was primary in 20 percent of emergencies regardless of diagnostic category.

I will attempt to deal with this confusion by first discussing the general principles of management applicable to all emergencies. In the final section, I will survey procedures appropriate to specific types of emergencies.

## V. GENERAL PRINCIPLES OF MANAGEMENT

### A. Assessment

Bridges<sup>15</sup> recommends that the physician elicit information in five significant areas:

- (1) The patient's behavior.
- (2) The patient's complaint (his own account, allowing him to tell as freely as possible).
- (3) Physical examination.
- (4) History from others (e.g., relatives, G.P., psychiatric hospitals, etc.).
- (5) Observation of the patient over a period of time, if necessary.

To these might be added pertinent laboratory tests where an organic brain syndrome is suspected, e.g., blood for bromides, barbituates, alcohol or amphetamines. A simple blood smear on a confused man referred to psychiatry on one occasion revealed a lymphocytic leukemia, a simple urinalysis on another occasion, a diabetic confusional state.

*The presence of signs of an organic brain syndrome acute (delirium) or chronic (dementia), with or without the psychotic manifestations of grossly disorganized behavior (hallucinations, delusions, etc.), is a medical, not a psychiatric emergency.* Romano and Engel<sup>7</sup> describe elegantly the early minimal indications of cerebral insufficiency.



They emphasize the vagueness, hesitancy, errors in speech, difficulties in smooth flow of thought and impaired recall of recent events. Once loss of recent memory and disorientation to day and date are present, significant impairment exists. We have not used the EEG as they so strongly recommend, since it is not readily available in emergencies. The EEG would indeed be useful, for example, to differentiate the withdrawal of the schizophrenic or the lethargy of depression from impending coma.

Increasing diagnostic acumen so as to recognize early cerebral impairment. Following this the biologic etiology must be explored. Too often the florid psychologic manifestations in delirium sidetrack physicians into spending too much time and effort suppressing the symptomatology and/or "punting" to psychiatrists. In so doing, they thereby abrogate their medical responsibility for the patient.

I would like to expand on each of Bridges' five areas:

- (1) If the patient is totally disorganized or totally mute and stuporous, little other than this observation can be extrapolated. Otherwise the symptomatic behavior of the patient can often be translated by applying the question—"what is he (she) saying and asking by his behavior?" The cowering, shaking figure in the corner is saying "I am helpless, harmless and frightened; please don't hurt me." The angry, destructive, threatening patient is saying "You all want to hurt me, I can trust no one, which scares me so much I'll fight and destroy anyone to protect myself."
- (2) Although I would let the patient tell his complaint in his own words, I prefer to lead the exploration by focusing on the question "why now?" The current life situation has precipitated the emergency. The interaction between the patient and the principal people in his life leave him dissatisfied in regard to the three essential needs of every human being: Affection, significance and security.<sup>23</sup> Your job: Discover how, what and why this has happened.

- (3) This is crucial but hardly needs emphasis to this paper's audience.
- (4) A psychiatric emergency is a psychosocial emergency. The better the information and cooperation from those important to the patient, the better the prognosis.
- (5) This might involve overnight hospitalization when the diagnosis is unclear. In my experience most emergencies occur in the late afternoon or evening, as well as on special days like holidays or particular times of the year like the spring. Astrologists' conceptions to the contrary, the presence of a full moon does not increase the incidence of psychiatric emergencies.<sup>24</sup> Many crises seem less significant to the patient in the morning, especially after a good night's sleep when the ego is restored.

#### B. Therapeutic Approach

A useful therapeutic approach in crisis involves five components:

- (1) Explicit empathy  
Explicitly conveyed empathy for the patient's and family's discomfort enhances the crucial therapeutic alliance. This can then be relied on to effect changes necessary to alleviate the emergency. The affect which threatens to overwhelm a patient in crisis provides an excellent opportunity to be empathic. The compassionate physician recognizing and sharing the discomfort provides the patient unique opportunity. Most prefer the sufferer to be brave, ignore, or privately bear their suffering rather than burden others with it. The tailspin of increasing anxiety and depression followed by progressively more primitive coping maneuvers (regression) tends to isolate the patient from his family and friends. Your empathic involvement reverses the isolation relieving the loneliness, thus providing a primitive comfort akin to early mothering.
- (2) Confidence  
The physician's calm confidence reduces anxiety which increases the likelihood that the patient will identify



with the physician's competent approach to crisis situations.

(3) Hope

Hope like confidence is contagious. If honestly experienced and effectively conveyed, it is the prime motivator for therapeutic change.

(4) Active leadership

Active leadership implies control. The patient is out of control and requires the outside help provided by the therapist. There is no place here for a passive permissive approach. The therapist must take the rudder firmly to get the patient or family back on course before returning it to their hands.

(5) Intrusiveness

The person in crisis, unable to competently survey all aspects of the situation, experiences tunnel perception instead. In an abortive attempt to cope, he often chooses a single inappropriate focus or jumps in a disorganized manner from one to another. The therapist must establish himself as a crucial variable in the patient's life, demanding some of the limited available attention if he is to have influence. At times this requires that a dramatic quality be introduced.

C. Treatment Modalities

The three available are talk (psychotherapy), environmental manipulation and chemotherapy.

(1) Talk

Included here are all the techniques of supportive psychotherapy. Skills of effective communication in crisis include those outlined as aspects of the basic approach noted above, as well as more specific manipulations discussed by Bird<sup>25</sup> and more recently by Briggin and Zinberg.<sup>26</sup> "Talk which calms and gains control of the frightened, soothes the angry, clarifies reality for the confused, halts foolish or destructive behavior in the impulsive, offers realistic hope to the hopeless, supports and sustains the bereft patient, stimulates the patient

who . . . "gives up," . . . can be learned and manipulated as an art and science of human communication, and is worthy of the best efforts of the physician to master . . ." <sup>27</sup> Rational discussion of the life situation and past, present, as well as future possibilities is itself conducive to significant relief. Shurley emphasizes that direct forceful communication "in the hands of the recognized respected physician is powerful medicine, fit for emergencies."

(2) Environmental Manipulation

Manipulation of the patient's environmental situation includes physical force, hospitalization, job change, changes at work, alterations in living arrangements, commitment, etc. Be cautious of simplistic notions such as overwork with vacations suggested as panaceas. Overwork exists but should be regarded as symptomatic rather than causal in almost all situations. Precluding this defensive behavior can release a serious depression or even suicide.

Physical force deserves more detailed consideration. The violent or disorganized patient out of control and not responsive to talk must be restrained for his sake, as well as others. At the root of the outburst frequently is overwhelming anxiety born of the incapacity to control and protect the self. The solution is to muster an overwhelming number of calm, competent, firm but nonpunitive, able-bodied men, at least "one for each limb, plus one." Confront the patient with the "show of force" and your humane determination to protect him from harming himself or others. If calm does not ensue, do not hesitate to put force into action. A well-trained crew of mental health assistants rather than untrained police, relatives, or friends will ensure success. The violence may reflect a desire to save face or displace anger. Considerable skill is then necessary to avoid actual fighting and injury. Temporary sedation is indicated rather than prolonged physical restraint.



### (3) Chemotherapy

Three categories of drugs are of use in psychiatric emergencies. They all serve as sedative tranquilizers. "Thorazine®" (chlorpromazine) orally in doses of 50 to 100 mg. repeated every 45 minutes to four hours until sedation ensues is effective. Parenteral (I.M.) administration of 50 to 75 mg. IM every 45 minutes to four hours may be necessary. With I.M. use, hypotension is a danger. Blood pressure should be checked after each dose, recumbency encouraged and shock position employed if hypotension occurs. "Thorazine®" is the drug of choice with schizophrenic and manic excitements.

In organic disorders, especially where seizures are a concern as in alcoholism, "Librium®" (chlordiazepoxide) is a better choice both for emergent and continuing care. Oral doses of 25 to 100 mg. repeated every one to four hours as necessary may be used. For very rapid effect parenteral (IM or IV) injection of 50 to 100 mg. produces very salutary results.

For IV use, five cc of saline should be used as the diluent for the powder, rather than the IM diluent provided. Give IV injections over a one-minute period. Hypotension constitutes the main acute side effect and can be managed with postural measures. Although 300 mg. can be used over a six-hour period, the package insert recommends this dose not be exceeded in a 24-hour period. I have safely used twice this in a day. Caution is warranted, however, as "Librium®"<sup>28</sup> has a prolonged 24-48 hour half life, and is therefore capable of inducing cumulative CNS depression. High doses of "Librium®" should be avoided in subjects with renal insufficiency.

Some still prefer rapid acting parenterally administered barbiturates such as thiopental (pentothal) IM or injected slowly IV in 250 to 750 mg. doses. Anesthesia is rapidly produced. Drawbacks include the potential for laryngospasm and cardiac arrest. If

agitation persists, as the sedation wears off, one still face the necessity of either reanesthetizing the patient or substituting the major or minor tranquilizer that might have been started in the first place. Severe liver damage contraindicates the use of rapid acting barbiturates or "Thorazine®."

Great care should be taken and generally much lower doses employed in elderly and/or debilitated individuals when utilizing any of the drugs mentioned. In any patient already sedated, omit the next scheduled dose.

As with force, do not use homeopathic doses of medication. If for the sake of safety and humaneness, the patient needs tranquilization, give adequate doses repeated frequently until calm ensues. Small doses diminish the patient's control further, and thus can paradoxically increase anxiety.

Severe suicidal depressions of emergency nature do not respond to these agents, although the frequently associated agitation might. In those rare cases of malignant depression with incessant self mutilating behavior, emergency electroconvulsive therapy dramatically alleviates the problem. In any depression, to the extent antidepressants are beneficial, their effect is delayed one to two weeks. They are not emergency drugs.

A final hint for the drug management of those in crisis: Major tranquilizers such as the phenothiazines (chlorpromazine - "Thorazine®"; trifluoperazine - "Stelazine®"; perphenazine - "Trilafon®"; fluphenazine - "Prolixin®"; thioridazine - "Mellaril®") and minor tranquilizers in the benzodiazepine group (chlordiazepoxide - "Librium®"; diazepam - "Valium®"; oxazepam - "Serax®") have a potentially fatal massive dose (MD) to daily dose (DD) ratio of at least 30:1. This allows you to provide up to a month's supply with safety. Antidepressants of the tricyclic (imipramine - "Tofranil®"; amitriptyline - "Elavil®") or the monoamine



oxidase groups (phenelzine - "Nardil®"), (tranylcypromine - "Par-nate®") and minor tranquilizers of the substituted diol group (meproba-mate, "Solacen®" - tybamate) have a MD/DD of only 10:1. Dialysis is useful only with the small molecule MAO inhibitor antidepressants and substituted diols. Note that tricyclic antidepressants, the drugs of choice in severe depressions are the most lethal in overdose and not effectively dialyzable.<sup>29</sup> Since patients in crisis require a minimum of once or twice weekly visits, 30-day supplies are rarely indicated.

Management of emergencies calls for a calm, deliberate yet creative use of all three approaches—talk, environmental manipulation and chemotherapy.

## VI. MANAGEMENT OF SPECIFIC EMERGENCY SITUATIONS

### A. Social

In preparing this section I have freely drawn from a number of sources of references<sup>30, 31, 32, 33</sup> to supplement my own experience.

#### *Suicidal Behavior*

Officially the tenth leading cause of death with more than 20,000 suicides recorded per year, suicide probably accounts for ten times this figure in actual deaths. The discrepancy reflects both the underreporting of known suicides, as well as the naive assumption that all accidental deaths are unintentional rather than intentional or "subintentional."<sup>34</sup> The number of attempts has been estimated at seven to ten times this rate.

Women attempt suicide at least twice as often as men especially in the second and third decades of life. Men complete suicide two to four times as frequently as women, the incidence increasing with age.

Suicide occurs less among the married (1X), especially with children than the single (2X) widowed (4X) or divorced (4X). In the United States suicide predominates among the poor, the foreign born, and the white, although the urban black rate is rising rapidly.

Data on women indicate that the menstrual period is a time of increased suicidal and accidental behaviors.<sup>35</sup> Spring brings increased suicidal behaviors while in midwinter self-destruction is at a low ebb.<sup>36</sup>

Alcoholics, patients with chronic debilitating or terminal diseases, those recently informed of their diagnoses of serious pathology, etc., comprise the high risk groups in routine practice especially if they also display the dependent, dissatisfied personality pattern.<sup>37, 38, 39</sup>

Sixty percent of completed suicides have histories of previous attempts. Ten percent of attempted suicides will eventually kill themselves. Seventy-five percent of completed suicides have given rather clear warning.<sup>33</sup> Repeated attempts often increase in seriousness.<sup>40</sup>

Among those primarily psychiatrically ill, the depressives constitute the highest suicide risk. This obtains particularly if he is significantly depressed while retaining high energy levels, as in agitated depressions.

Suicide occurs in other psychiatric diagnostic groups as well. The most unpredictable is the schizophrenic, especially if he suffers depression, and/or threatening hallucinations.

The suicide attempt group presents some diagnostic difficulty. Is it a gesture or real attempt? I agree with Shneidman's argument that this is a dangerous and artificial dichotomy. He proposes that every suicidal patient be classified on two scales. The first is that of perturbation: How upset or disturbed is the patient. Second, evaluate the patient's lethality. An adolescent girl might be very upset with her parents but have no intention of killing herself, while an elderly man dying slowly after wife's death and alone in the world might be very lethal but not particularly disturbed. In addition to the epidemiological hints given above, evaluate the following:

(1) The method employed: Is it rapidly fatal or slow and not likely to succeed?

(2) To what extent is the behavior giving a message designed to manipulate others, rather than simply to effect death?

(3) How socially isolated from significant others is the patient? Have they become significantly alienated from or suffered what appears to them, an irretrievable



loss of a person. These would increase the risk significantly. In a recent article, Fawcett, *et al*,<sup>41</sup> found that the relationships to significant others constitute the crucial ingredients determining the seriousness of suicidal intent. These relationships serve as "shock absorbers" in times of crisis.

(4) The attempt having occurred, has the constellation of events altered sufficiently to diminish the chance of a repeat performance?

(5) Have close relatives committed suicide? This increases the risk.

(6) Can the patient talk hopefully and spontaneously about the future?

(7) A history of previous attempts, associated with significant depression requiring hospitalization including drug or electroconvulsive treatment, increases the lethality rating.

Two excellent articles on the evaluation of suicidal risks by Havens<sup>42</sup> and one by Litman and Farberow<sup>43</sup> are worth reading.

Suicidal behavior demands referral to a psychiatrist at least for evaluation. To determine the necessity of admission requires the evaluation of the preceding factors. Utilize the therapeutic approach recommended earlier to establish a therapeutic alliance. Obtain the information recommended in this section. Evaluate the psychosocial constellation. After this has been done, the decision regarding admission should be clear. Admission to hospital does not preclude a successful suicide attempt which can occur anywhere. The best preventative is an alteration of circumstances clearing the path for hope, while diminishing the current distress. This may transpire as a result of the attempt itself or your efforts at intervention. Until it has, the patient is not safe anywhere.

#### *Anxiety and Panic*

The reverberating circuit of anxiety and its physiological concomitants, palpitations, dyspnea, tremor, sweating and restlessness evokes the fear of death and loss of control. I would first attempt to talk to the patient, as recommended earlier. As an adjunct, or substitute if talk is impossible, drugs may be employed and discussion postponed.

Be careful to differentiate these from more serious conditions. Schizophrenics suffer great anxiety and need a more careful ap-

proach, due to their great difficulty in trust. Phenothiazines are required with them, generally in high doses; that is, 400 to 1,000 mg. of "Thorazine®" per day in the acutely excited state. You will have comparable difficulty calming hypomanics with talk. Often they respond only to massive doses of "Thorazine®." Lithium is now available but is not truly emergency medication requiring as it does laboratory controls and slow build up.

Organic confusions can demonstrate marked anxiety and restlessness which can mask early signs of intellectual impairment. Here specific treatment is required over and above symptomatic care. Agitated depressives, as noted earlier, are a very serious suicide risk. They must be differentiated from simple acute anxiety states.

#### *Aggressive or Bizarre Behavior*

This is among the most common major psychiatric emergencies. Schizophrenics, manics, the intoxicated, the organically confused, epileptics during seizures or in postictal confusion, and psychopaths can behave in this way.

An attempt should be made by the physician in a kind, confident, nonthreatening manner to clarify the reality of the situation and to reassure that no harm will come to him, nor will he be allowed to harm anyone. Never deceive by giving false promises or going along with a delusion in order to gain control. If an honest discussion fails, resort to overwhelming (and thus humane) doses of drugs or manpower.

#### *Delusional or Paranoid Patient*

To be paranoid is not necessarily to be schizophrenic. Many have localized and guarded delusional beliefs, ideas of reference or persecution. Often they are of above average intelligence and are very sensitive to criticism. In fact, their paranoia can be explained as the necessity to protect their self-esteem, which in men is intricately involved with masculinity. Past history of mental hospitalization, frequent lawsuits, frequent marriages, job changes, etc., with blame always ascribed to others or circumstance is common. Over intellectualization or extraordinarily detailed knowledge especially in the area of law, rules, or regulations is common.<sup>44</sup>

These are risky, unpredictable people who



make unreasonable demands and misinterpret communications of all sorts. If they feel slighted by authorities such as physicians, they become extremely angry and may then make direct or indirect attacks through police, courts or other channels.

They are notoriously bad risks for elective surgery, yet present frequently especially with chronic back and rectal difficulties.

(Worthy of note is the clinical clue that incipient schizophrenics can present to physicians with recent onset of vague or bizarre physical complaints.)

Be firm, matter of fact, calm, passively friendly, avoiding a conciliatory or aggressive approach. Never deceive. Agree to disagree openly and *without anger*, if you in fact do disagree. Have witnesses present if possible. Make it clear that you are available as an ally, but only if he desires it. Avoid even the slightest hint that you have a vested interest in dealing with him. Phenothiazines are useful only in those with an underlying schizophrenic thought disorder or in acute paranoid states. Chronic paranoid personalities defeat any and all efforts of treatment.

#### *Confusion and Impaired Consciousness*

In this category, I refer to the organic brain syndromes referred to in the section of assessment. Differentiate these from psychiatric conditions such as hysterical fugues or amnesias, catatonic or manic stupors. Expert consultation and observation over time may be necessary to differentiate the "functional" stupors from organic disturbances. Treatment, as noted earlier, requires attention to the specific underlying disorder, as well as symptomatic treatment with sufficient medication to avoid restraints. A well lit room, friendly, competent, consistent attendants or responsible family members around the clock, and frequent efforts to orient and reassure the patient are crucial.

#### *Alcohol and Drugs*

Although the effects of these fall into the previous category, the tremendous incidence of alcohol related problems, the ever increasing problem of drug abuse, and the special problems related to these kinds of intoxications merit a separate discussion.

One tends to be irritated by those who

misuse alcohol and drugs and to minimize the inebriated state as the simple reversible overindulgence it often is. Keep in mind that 50 percent of all fatal automobile accidents have one intoxicated driver involved.<sup>45</sup> Many suicidal people take drugs, in addition to alcohol, and the effects are often additive. Occult head injuries are frequent in the intoxicated. Alcohol is the most common sedative used to treat oneself even in severely ill schizophrenics. If there is any doubt, the following is indicated: Hospitalization, observation with careful neurological examinations, skull films, EEG, and only enough sedation to protect the patient from damaging or exhausting himself, as well as to allow evaluation and management. Recent studies show the superiority of "Librium®" over all other sedatives for these patients, as well as those suffering from DT's.<sup>46</sup>

Emergencies due to overdose or withdrawal from other sedatives, such as barbiturates and hypnotics of other types, pose similar problems. Wikler<sup>47</sup> describes in cogent fashion and in detail beyond the scope of this paper, the management of those withdrawing from these drugs.

In brief, alcoholics in withdrawal require adequate "Librium®" to avoid restraints, four to eight litres of nutritive juices by mouth (if cardiac and renal function are adequate), and high doses of B vitamins intramuscularly for several days.

Sedative addicts in a withdrawal emergency should be replaced on their medication, or liquid pentobarbital substituted after a 200 mg. test dose is administered while in the neutral state between intoxication and withdrawal.<sup>47</sup> If sleep supervenes, no substitution is required and "cold turkey" withdrawal is indicated. If no effect occurs including the absence of nystagmus on lateral gaze, then the equivalent of 1,200 mg. or more of liquid pentobarbital per day will be required to prevent the almost inevitable seizures and delirium that ensue in those taking the equivalent of over 800 mg. of pentobarbital.

Those showing some indication of intoxication two hours subsequent to the test dose require intermediate maintenance doses. Once maintenance is established, initiate slow withdrawal of no more than 100 mg. of pentobarbital per day.



Narcotic addicts in withdrawal can be stabilized with five to 20 mg. of methadone four times a day orally followed by slow withdrawal. Those suffering overdoses of narcotics can be cautiously treated with regular doses of nalorphine, three to five mg. IV until vital signs remain at acceptable levels. Consciousness is not restored readily and should not be a primary goal, since overdosage with these antagonists may ensue. Another danger is the violent abstinence syndrome that these agents can precipitate.<sup>48</sup>

The hallucinogens or psychotomimetics constitute a new and increasing problem. Although these emergencies are rare in relation to their total use, "bad trips," "flash-backs" (recurrence of phenomena induced by drug without new ingestion of it), confused behavior while on a poorly guided experience and prolonged psychotic episodes constitute bona fide emergencies.<sup>49, 50, 51</sup> Marijuana rarely produces these kinds of problems. Intoxications with drugs of the LSD or mescaline type should be treated with hospitalization, the supportive measures that are indicated in the organic patient, and "Thorazine®" in sufficient doses to calm the patient. Rarer, but more complicated, is combined hallucinogen overdosage especially if one drug is an anticholinergic, such as stramonium, scopolamine-atropine or the more potent newer analogues Sernyl or Ditrane.<sup>52</sup> Treatment for overdoses of the latter with phenothiazines may aggravate parasympathetic blockade. "Valium®" has been recommended for the treatment of all types of hallucinogen drug crises,<sup>53</sup> since it is effective and does not aggravate the parasympathetic blockade.

Other "urgencies" encountered in practice are touched on by Shurley and Pokorny.<sup>27</sup> They include:

#### *The Self-mutilating Patient*

Deluded hallucinating schizophrenics, confused organics or suicidal patients may mutilate themselves directly or by sabotaging the treatment devices used on them, e.g. casts, stitches, catheters, etc. Constant nursing care, adequate sedation and treatment of the underlying disorder is indicated.

#### *The Patient Who Doesn't Cooperate or Demands to Leave "AMA"*

The ounce of prevention proverb is applicable. Those physicians who develop adult

therapeutic partnerships with their patient will be plagued much less by lack of cooperation and loss of patients. These productive therapeutic partnerships stand in contrast to those physician patient relationships characterized by cool minimal involvements or paternalistic, omnipotent, omniscient attitudes. The latter evoke magical expectations and unrealistic demands with disappointment the inevitable result.

Most uncooperative patients are responding to anxiety, anger, and diminished trust in the medical staff. Rather than arguing, a calm reassuring exploration of the basis of these feelings ameliorates the majority of these situations. The largest stumbling block remains the physician's threatened self-esteem when his care is questioned. The competent secure physician will weather the abuse, explore the concerns, and in so doing give tremendous reassurance.

If the situation is emergent, the patient is psychotic and dangerous to self or others, then commitment may be indicated. If so, calmly and firmly, inform the patient and his family while carefully justifying your recommendation to them and in your records.

#### *The Patient Who Feels Hopeless*

There is increasing evidence that the "giving up, given up"<sup>54</sup> attitude complex contributes to the development of disease states, as clinicians have suspected for generations. In addition, suicide potential is great, cooperation in treatment and convalescence is poor or perfunctory. The best solution remains the well cultivated relationship between the medical team and the patient, coupled with active, concerned, direct exploration of the patient concerns.

#### *The Patient About to Receive Bad News*

How much one tells a patient and how directly, should be titrated less against the physician's own discomfort than indications that the patient gives of how much he desires to know. In the case of impending death, a responsible adult family member must, of course, be informed. A private unhurried discussion with the implicit promise of emotional support by you, if desired, will allow the expected and appropriate emotional upheaval to occur. The personal physician, privy to all the medical details, having the advantage of an established relationship and the patient's trust, should handle this



most difficult of all medical responsibilities. This approach would apply as well to family members about to be told of a patient's death.

#### B. Personal

As noted earlier, this refers to personal life crisis emergencies in contradistinction to the more traditional psychiatric emergencies such as the relatively overt self and other directed destructive behavior discussed in Section A. An extensive discussion of the multitude of potential crises throughout the life cycle is beyond the scope of this paper. Some excellent references in this area are noted in the bibliography.<sup>55, 56</sup>

I will outline several important life crises with emergency potential to exemplify this group.

#### *School Phobias*

Almost invariably this is a separation anxiety stemming from difficulties in the relationship between child and parents.<sup>57</sup> Generally less serious in the young child, it none the less requires that the child immediately return to school while, not after, counseling is provided, as necessary, to child and parents. School authorities should be included in the diagnostic evaluation and treatment planning. Onset of school aversion in adolescence may herald an incipient psychosis. Referral to a psychiatrist is generally indicated.

#### *Death of Loved One*

The prolonged and destructive effects of unresolved grief were excellently described in the paper by Lindemann referred to earlier.<sup>6</sup> Survivors deserve a thorough opportunity to "work through" the grief. Bowlby<sup>58</sup> has described the three stages of normal grief as protest, despair and detachment. Those who express little grief are "brave," and discuss their relationship with the deceased very little, constitute the prime candidates for unresolved grief and prolonged life crippling symptomatology. Marked grief persisting longer than three to six months also indicates a pathological process worthy of psychiatric referral. Physicians should encourage the survivors to openly express to him and each other thoughts, feelings and memories of the deceased.

A special case involves suicide. Those who

survive the suicide must be helped to cast off the legacy of guilt that the common anger induced suicide leaves in its wake.

#### *Menopause*

The shibboleths of eternal youth and drug panaceas for any and all symptomatology prevail in our culture. These torment practicing physicians yet implicitly are encouraged by our omnipotence motivated therapeutic zeal. Growing pains afflict the muscles of many youngsters. Many adolescents experience breast tenderness. In a similar way, most menopausal women experience the discomforts of flushing, irregular menses and cramping. Although careful regular exams are necessary, much iatrogenic psychological and physical distress can result from over enthusiastic therapeutic zeal. Especially in women the "change of life" involves physiological endocrine readjustment and psychological life inventory reassessment which can lead to significant depression, masking as physical symptomatology. Parasuicidal encouragements to physicians to recommend surgery with the inevitable physical and psychological sequelae may constitute an irresistible seduction for "cure" oriented physicians. A thorough workup is indicated. If definite pathology is not found and exploration of the patient's life situation indicates significant life disappointments, then earnest discussion of these problems should ensue. Consider psychiatric referral.

Middle and late middle age impotence is the male equivalent and is commonly precipitated by retirement, job change, or even a transurethral resection of the prostate. Similar management is indicated. In the absence of definite pathology hormonal therapy is *specifically contraindicated*. The overwhelming majority of those with impotence suffer an underlying depression.

#### VII. SUMMARY

I have attempted to review pertinent literature on the definition, incidence and management of psychiatric emergencies in medical practice. Freely interposed with this review are my own thoughts on these same aspects of emergency care. □

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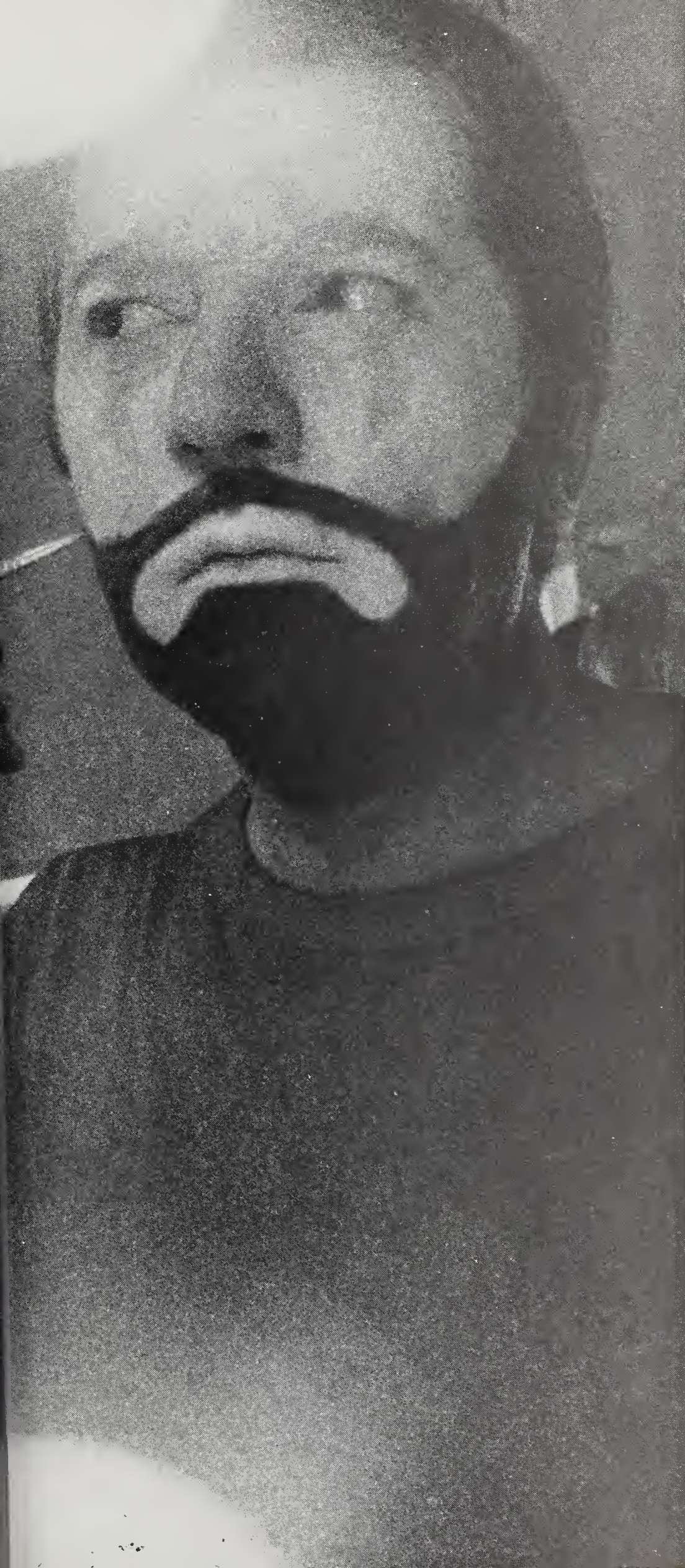
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**Adult Dosage:** One tablet three times a day.

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## **Phenobarbital 15 mg.**

**Warning:** May be habit-forming.

For **Indications**, **Contraindications**, **Precautions**, **Side Effects** and **Dosage** see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

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For **Indications**, **Contraindications**, **Precautions** and **Side Effects** see Pro-Banthine.

**Dosage Form:** Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

**Dosage:** The recommended initial dosage is one tablet in the morning and one at night.



# Remission-Induction Therapy in Acute Leukemia in Children

DANIEL M. LANE, M.D.

*Experience at Children's Memorial Hospital in remission induction of acute leukemia in children is summarized and the critical role of prednisone in satisfactory induction is emphasized.*

THE MOST common treatment regimen for acute leukemia in children is a two-phase program. First, a remission-induction phase is used in which combinations of drugs are usually given in an attempt to completely clear the marrow and tissues of leukemic cells, followed by a second phase of remission maintenance where a different drug is used to keep the tissues free of leukemic cells. I think a new phase may be coming through the work of the National Cancer Institute, St. Jude's Research Hospital, and other institutions. This involves the use of multiple drugs (four or five agents) for a year-and-one-half to two years followed by discontinuation of these drugs. We would like to present the results of remission-induction studies that have been done here since July, 1966, as a member of the Southwest Chemotherapy Study Group, Pediatric Division. (Table 1)

Since July, 1966, we have undertaken 50 induction attempts. Thirty-nine of these have been in children with acute undifferen-

tiated leukemia, seven with acute myelocytic, three with acute monocytic, and one with acute myelomonocytic leukemia. This represents 25 different patients or an average of two induction attempts per patient with twenty patients having acute undifferentiated leukemia, three acute myelocytic leukemia, one myelomonocytic, and one monocytic.

We have used eight different combinations of drugs or single drugs in the induction attempts, as shown in Table II. The most widely used regimen has been vincristine and prednisone administered concurrently. We have used methotrexate intravenously, daunomycin (both alone and in combination with prednisone), 6-mercaptopurine and prednisone in combination, and vincristine and "cytoxan®." 6-MMPR and cytosine arabinoside are both new investigational drugs. Cytosine arabinoside is a drug which may be an effective agent in acute myelogenous leukemia. 6-MMPR is a relative of 6-MP, 6-methyl mercaptopurine riboside.

The treatment periods for remission induction are usually limited to four weeks. Some patients are treated for as long as five or six weeks, especially where toxicity has necessitated reduced dosage. At the end of this period, patients are evaluated for re-

TABLE I	
50 INDUCTION ATTEMPTS	
39 acute undifferentiated	
7 acute myelocytic	
3 acute monocytic	
1 acute myelomonocytic	
25 PATIENTS	
20 acute undifferentiated	
3 myelocytic	
1 monocytic	
1 myelomonocytic	

From the Department of Pediatrics and the Clinical Research Center, Children's Memorial Hospital, University of Oklahoma Medical Center, Oklahoma City, Oklahoma. The Clinical Research Center is supported by Grant No. FR-62 from the Division of Research Facilities and Resources, National Institutes of Health. These studies were also supported by Grant No. C1121201 from the National Cancer Institute.



TABLE II  
DRUG REGIMENS

1. vincristine and prednisone
2. methotrexate intravenous
3. daunomycin and prednisone
4. daunomycin alone
5. 6 MP and prednisone
6. vincristine and "Cytosan®"
7. cystosine arabinoside
8. 6 MP and 6 MMPR

sponse to therapy. Four different parameters are used to evaluate response, including the bone marrow, blood, physical findings, and symptomatology. (Table III) The figures to the left are the rating numbers with '1' being good and '3' being bad. To qualify for a rating of '1', a bone marrow must have five percent or fewer blast cells, the sum of lymphocytes and blasts must not total more than 40, and for acute myelocytic disease, no more than five percent blasts. For a '2' rating, the blast cells must be between 5.1 percent and 25.0 percent or the sum of lymphocytes and blasts less than 70 percent. For acute myelocytic types, there must be less than 40 percent blasts. If there are over 25 percent lymphoblasts, or the sum of lymphocytes plus blasts exceeds 70 percent, or (for acute myelocytic forms), if blasts exceed 40 percent, the marrow receives a rating of '3'.

In Table IV the peripheral blood findings, or hemogram, are shown as a combination of four different values: Hemoglobin, neutrophilic granulocytes, blasts, and platelets. For a rating of one, a child less than two years of age must have a hemoglobin equal to or greater than ten Gm. percent. If he is over two years of age, the hemoglobin has to be equal to or greater than 11 Gm. percent. The granulocyte counts must be equal to or greater than 1,500/cu.mm., with no blasts present in the peripheral blood, and the platelet count must be equal to or greater than 100,000. For a rating of two, the hemo-

TABLE III CRITERIA M-BONE MARROW			
Rating	Acute Lymphocytic Leukemia		Acute Myelocytic Leukemia
	Blast Cells	Lymphs + Blasts	Blast Cells
1	0-5.0	0-40	0-5.0
2	5.1-25.0	40.1-70	5.1-40.0
3	> 25	> 70	> 40

TABLE IV  
H-HEMOGRAM

Rating	Hemoglobin <2y/o 2+y/o	Neutrophilic Granulocytes	Blasts	Platelets
1	≥ 10 ≥ 11	≥1500	0	≥100,000
2	≥ 7+	≥500	≤5%	<100,000
3	< 7	<500	>5%	<25,000

globin is again seven to 11 Gm. percent, granulocytes 500 to 1,500/cu.mm., blasts must be fewer than five percent, and the platelet count can be less than 100,000, but must be more than 25,000. If the hemoglobin is less than seven Gm. percent, the total granulocytes less than 500/cu.mm., over five percent blasts or less than 25,000 platelet count, a rating of three is required.

The parameters for physical findings and symptomatology are shown in Table V. Using the National Criteria, the liver and spleen should be normal for age for a rating of one, between the umbilicus and its normal position for a rating of two, and below the umbilicus, for a rating of three. Evidence of other leukemic involvement, such as hemorrhage or enlarged nodes, results in a rating of three. For symptomatology to have a one rating the patient must be asymptomatic and have normal activity. For a two rating, he can be symptomatic but have normal or limited activity. If the patient is symptomatic and in bed most of the time, he is given a rating of three.

Each patient is evaluated at the completion of the study as to the quality of his response. For a complete remission, the patient must be rated one in all categories. For a partial remission, he can have a rating of two *but not three* in any category. The patient is considered to have not responded adequately to the therapy if he is three in any category.

Table VI demonstrates rather disappoint-

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*A 1961 graduate of the University of Texas Southwestern Medical School, Daniel M. Lane, M.D., has been certified by the American Board of Pediatrics. He is now Assistant Professor of the Department of Pediatrics at the University of Oklahoma Medical Center. He is a member of the Southern Society for Pediatric Research and the American Academy of Pediatrics.*



TABLE V

P—physical
A. Liver
B. Spleen
C. Lymph Nodes
D. Other Leukemic Changes, Including Hemorrhage
S—symptoms
1—asymptomatic and normal activity
2—symptomatic with normal or limited activity, but less than 50 percent of waking hours in bed
3—symptomatic with more than 50 percent of time in bed

ing results we have had in the treatment of acute monocytic, myelocytic, and myelomonocytic leukemia. We have had 11 remission induction attempts with eight “no responses.” Three patients were not evaluable because they had severe complications. One had upper G.I. obstruction due to a clot blocking the esophagus; one had severe phlebitis from the administration of the drug; and one, unfortunately, was a patient who died due to toxicity from the drug.

TABLE VI

Acute Monocytic
Acute Myelocytic
Acute Myelomonocytic
11 Remission Induction Attempts
8 No Response
3 Not Evaluable
1 Upper G.I. Obstruction
1 Severe Phlebitis
1 Toxicity Death

The data for the five studies used in an attempt to induce remission in acute undifferentiated leukemia are shown in Table VII, except for vincristine and prednisone which are on Table VIII. Methotrexate intravenously was used for two patients, with one patient achieving complete remission and the other dying too early to be evaluated for response. In both patients, unfortunately, we saw evidence of marked hepatic toxicity and this significantly limited the use of the drug. Daunomycin and prednisone were used in four patients. As shown in Table VII, there were two patients on their fifth induction attempt, one on the fourth attempt and one on the sixth attempt. Even that late in the disease, there were two patients who achieved a complete remission and two had no response. On 6-MP and

TABLE VII  
ACUTE UNDIFFERENTIATED

Methotrexate Intravenous (2)
1 Complete Remission
1 Early Death
Daunomycin and Prednisone (4-5th, 5th, 4th, 6th)
2 Complete Remission
2 No Response
6 MP and Prednisone (1)
1 Complete Remission
Vincristine and “Cytosan®” (3)
2 Partial Remission (M-2)
1 Early Death

TABLE VIII  
VINCRIStINE AND PREDNISONE (29)

20 Complete Remission	4 weeks
2 Complete Remission	6 weeks
6 Partial Remission	(M-1)
1 No Response (Steroid Resistant)	

prednisone, we had one patient who achieved a complete remission with a first induction attempt. Vincristine and “Cytosan®” were used in three patients, primarily because of steroid resistance, with two of these patients obtaining a partial remission. These patients were limited to a partial remission because they did not completely clear the marrow of blasts with a percentage ranging from five to 25 percent. There was one early death in this group.

The data on concurrent vincristine and prednisone are given in Table VIII. Vincristine was given at a dosage of 2 mg/m<sup>2</sup>/l.v., once weekly, and prednisone at a dosage of 60 mg/m<sup>2</sup>/P.O., daily. This was continued in most cases for four weeks, in some patients for five weeks, and in a few, excluding the vincristine, as long as six weeks. Out of this group, there were 20 complete remissions at four weeks and two at six weeks. There were six partial remissions with all patients achieving M-1 status. The failure to achieve complete remission was almost entirely on the basis of a low hemoglobin. There was one “no response” in the group and he was known to be steroid resistant having relapsed on steroid therapy.

TABLE IX  
VINCRIStINE AND PREDNISONE

1st	11 c.r.	1 p.r.	
2nd	7 c.r.		
3rd	3 c.r.	1 p.r. (M-1)	1 n.r.
4th	1 c.r.	2 p.r. (M-1)	
5th		2 p.r. (M-1)	
28 of 29 achieved M-1 marrow			



TABLE X

PREDNISONE	
34 Induction Attempts	
25 Complete Remission	(73.5%)
6 Partial Remission	(17.6%)
3 No Response	( 8.9%)

As shown in Table IX, we then evaluated therapy as to how many attempts had been made previously. This did not mean that vincristine and prednisone had been used on every attempt. There might have been other drug combinations, but the data were broken down according to attempt number. In terms of first attempts, we had 11 complete remissions and one partial remission. The only reason the patient was in partial remission was a hemoglobin of 9.5 Gm. percent and it had to be 10.0 Gm. percent to be considered a complete remission. On second attempts, there were seven complete remissions. On third attempts, there were three complete remissions, one partial remission (but with a M-1 marrow) and one "no response." The one "no response" was a patient who was steroid resistant. In fourth attempts, there was one complete remission, and two partial remissions (both achieving M-1 status). On fifth attempts, there were two partial remissions with M-1 status. Out of the 29 studies, 28 achieved M-1 marrow status.

Table X shows the results using prednisone in combination with three different agents. In 34 induction attempts, there were 25 complete remissions (almost 75 percent), six partial remissions (17.6 percent), and three "no responses." This represents an over-all M-1 marrow status rate of 91 percent.

TABLE XI  
CONCLUSIONS

1. No effective agent for acute leukemias other than acute undifferentiated at present time.
2. Vincristine and prednisone excellent combination for remission induction in acute undifferentiated even late in course of disease.
3. Prednisone critical drug in remission induction and should not be used for maintenance therapy in acute undifferentiated leukemia.

In closing, I can say that there is no really effective agent for the management of any leukemia other than the acute undifferentiated (acute lymphocytic) leukemia of children and no results in our 11 patients suggest that we have anything that will give us any hope. Vincristine and prednisone are an excellent combination for remission induction in acute undifferentiated leukemia, even late in the course of the disease, but prednisone is the critical drug in remission induction therapy. It should not be used for maintenance therapy in acute undifferentiated leukemia.

I would like to quote from a memorandum sent from a good friend of mine, Doctor Don Fernbach, who is at Baylor and is Head of Category IV Studies in Acute Leukemia for the Southwest Cancer Chemotherapy Group, Pediatric Division. He says, "I am soliciting suggestions for maintenance therapy for our Category IV Acute Leukemia Studies. We have an abundance of drugs for induction studies in these patients, but are in dire need of maintenance drugs." That is about where we stand. We wish we had our "insulin" so that we could maintain these patients longer, but we don't. □

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## 12th National Conference on the MEDICAL ASPECTS OF SPORTS

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## Tumor Clinic Proceedings

Edited by  
RICHARD H. BOTTOMLEY, M.D.\*

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### CASE No. 29: Squamous Cell Carcinoma of the Lip

**PRESENTATION:** The patient today is a 46-year-old white male who was seen in the Surgery Clinic one week ago. He originally saw a physician in June, 1967, because of a left lower lip lesion. A biopsy proved it to be squamous cell carcinoma, moderately well-differentiated. It was treated with five x-ray treatments to a total tumor dose of 4,300

rads. The patient did well with regression and disappearance of the lip lesion until August, 1968. He was examined again and was noted to have a left submandibular node and because of this node he had a left radical neck dissection. The report states that he had squamous cell carcinoma in the specimen. We do not know at what levels or how much was found. In December, 1968, he was seen with a left parotid gland mass and a left posterior neck node. He had a superficial parotidectomy and further node dissection which again showed squamous cell carcinoma, moderately well-differentiated. The extent of this lesion in the resected specimen isn't revealed. Approximately six months later he presented with another parotid mass on the left and this was treated by a total parotidectomy and resection of part of the mandible. The specimen again revealed squamous cell carcinoma. In July, 1969, he had recurrence beneath the operative site and was referred to the University of Oklahoma Medical Center. At that time he received 7,000 rads to the neck with a good response and disappearance of the tumor mass. He was re-examined in January, 1970; a recurrence in the left cheek was found and he received 6,000 rads with good response. This past month, February, he presented with some left cheek nodules and received radiation therapy for these.

The University of Oklahoma Medical Center Tumor Clinic meets weekly in Goddard Auditorium of the Oklahoma Medical Research Foundation, and is made up of members of the Departments of Dermatology, Medicine, Oral Surgery, Otorhinolaryngology, Pathology, Radiotherapy and Surgery from the University Hospital, Veterans Administration Hospital and the Oklahoma Medical Research Foundation. The opinions expressed are intended as suggestions for therapy. The final choice of treatment is the responsibility of the managing physician or service.

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DOCTOR ACKER: He also had nodules in his neck and on the mandible.

PRESENTER: He developed nodules in his right neck, and in the course of the past month has developed four more of these. On physical examination there is an old left radical neck scar and left facial nerve weakness. He has several nodules on both sides of the neck, all about 1 x 1 cm, hard and obviously representing metastatic disease. He was referred to us because it was felt radiation therapy had no more to offer this man.

DOCTOR CONDIT: Any questions about the history? Doctor Snow, in 1967, this man had 4,300 rads of x-ray therapy for a lesion of the lower lip. Do you have a comment on management?

DOCTOR SNOW: I'd rather Doctor Acker comment on it. I don't think it is the usual form of therapy for carcinoma of the lip, but I'd rather hear what Doctor Acker has to say.

DOCTOR ACKER: As I understand it, he had 4,300 rads in five fractions. We do not usually treat lesions this rapidly. This was supposedly a squamous cell carcinoma of the lower lip, and we can discuss whether you use radiation therapy or surgery depending upon the size of the lesion. I have no idea what size lesion this was originally. Radiation therapy as a primary form of treatment can be curative for carcinoma of the lower lip.

DOCTOR CONDIT: Ordinarily, how would you treat a lesion of this sort?

DOCTOR ACKER: You would treat a lesion like this, depending on its size and amount of infiltration, to a total dose of about 6,000 rads in six to eight weeks.

DOCTOR CONDIT: With what energy of radiation?

DOCTOR ACKER: Ortho-voltage is preferable, in the range of 140 to 250 kv. If it is squamous cell carcinoma, it should respond very well. The other question that arose was whether or not the parotid tumor was a secondary primary.

DOCTOR CONDIT: Doctor Snow, what do you feel about the parotid?

DOCTOR SNOW: A pre-auricular metastasis from carcinoma of the lip is somewhat unusual. I would gather from the way the patient's history is described that the me-

tastasis occurred in the left neck and then the lesion in the pre-auricular area was secondary to the metastasis in the neck, rather than secondary to the lesion in the lower lip.

Although the treatment of the lesion on the lip was too rapid and the dose was too low, fractionated therapy given over a prolonged period of time and amounting to a tumoricidal dose might not have resulted in a different chain of events. If all the problems resulted from the metastasis to the left neck, i.e., if the metastasis had already occurred before radiation therapy was started, we would likely have seen the same sequence of events unfold. I would be inclined to think the preauricular lesion was a metastasis from the neck metastasis and not a second primary.

DOCTOR CONDIT: How do you feel about the primary surgical management of lower lip lesions?

DOCTOR SNOW: In very large lesions there is a place for surgical resection. Radiation therapy offers just as good an opportunity for cure in most lower lip lesions, and it often results in less deformity than surgical excision. Both are acceptable forms of treatment.

DOCTOR CONDIT: Now, we are confronted with moderately extensive recurrent disease. How would you manage the patient now?

DOCTOR SNOW: My findings at the present time are that he has a very superficial mass that is subcutaneous over the right lamina of the thyroid cartilage, several masses in the area of the thyroid gland, one relatively superficial small mass in the left supra-clavicular area, and a large mass posterior to the head of the clavicle. I can't outline the entire extent of this mass but it is the one which is worrisome as far as considering surgical resection. I don't think that this last mass I described can be resected satisfactorily. I don't think there is a very great likelihood that one could get around this adequately; therefore, I don't feel that surgery has any role in his present treatment. There are three other factors that argue against surgery in this patient. First, these nodes are popping up on almost a daily basis. Doctor Acker, I don't know how long it has been since you have seen him, but you have pointed out one mass that



## *Tumor Clinic* / BOTTOMLEY

is present now that wasn't there on his last visit to you.

PRESENTER: He has one present now that was not present last week.

DOCTOR SNOW: The second factor is that these masses are superficial to the platysma. One can chase these masses surgically, but one just can't chase them fast enough. Another factor is that there is still induration in the cheek just below the zygoma. I don't know if it is reaction to radiation or persistent tumor, but I would be very suspicious that it is a persistent tumor. Since I don't feel that surgery is indicated, if these masses in the neck can be treated with radiation therapy that would be the best thing to do.

DOCTOR CONDIT: Doctor Bogardus, what is your feeling about additional radiation therapy?

DOCTOR BOGARDUS: The problem with this patient is that this is a recurrence in an area that we have treated.

DOCTOR SNOW: You have treated down close to the sternum?

DOCTOR BOGARDUS: Yes, we have treated that area. This is a classic example of cancer probably metastasizing retrograde into the lymphatics and it has been just outside our treatment field every time. This has been unfortunate because initially when we started treating him we considered this a local post-radical neck recurrence. We treated him as such and then it became apparent

that this was indeed a retrograde lymphatic metastasis throughout his skin.

DOCTOR CONDIT: So that leaves us with the problem of chemotherapy and methotrexate is the drug that is ordinarily used. I think with a lip lesion you have a fair chance of getting a reasonable result. By a fair chance, I mean maybe 30 to 40 percent improvement that may last from three to six months. It is somewhat better in this location than in other sites. As to when to start treatment, I think the way these things are popping up, that it would probably be advisable to start now.

DOCTOR SNOW: Could I ask Doctor Bogardus if he feels differently than I do about surgery in this man?

DOCTOR BOGARDUS: From a practical standpoint, I don't think surgery can approach this, for the reasons you just stated. If there were just two or three lesions, then they could be removed, but I think you will find that he has a lot more tumor than is evident right now. I would like to see something offered him, but I really don't think there is much left. I would like to go back and retreat these areas, but from a practical standpoint I don't feel that we can do that.

*FINAL DIAGNOSIS:* Squamous cell carcinoma of the lip with multiple metastases.

*TUMOR CLINIC RECOMMENDATION:* The patient has too extensive disease for further radiation therapy or surgery. Methotrexate given as a single intravenous dose every two weeks offers a 30 to 40 percent chance of palliating the disease from three to six months. □

40th Annual Fall Conference

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# *The History of Anesthesia: The Development of Anesthesiology in Oklahoma*

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*The discovery of anesthetics in the 1840's was a necessary prelude to modern surgery. With the advances in anesthesiology since 1930, this specialty progressed rapidly.*

THE GENERAL PUBLIC dreaded anesthesia a few decades ago. Today patients and doctors accept the techniques of anesthesiology with confidence. We propose to sketch the history of the advances, note the increasing use of anesthesia in general practice, and outline the establishment of this specialty within the profession and the University School of Medicine in Oklahoma.

Faulconer and Keys, and many others, have recorded the history of this branch of medical science. Davison interspersed with explanatory text a rather detailed chronology, whereas Leake tabulated more briefly the important developments. In the *Bibliotheca Osleriana* the relevant literature, including early work on hypnotism as a preoperative measure, was selected and annotated to portray the advances in anesthesia. Fulton and Stanton used a similar technique in a later monograph. Selected excerpts from the original sources were published by

several authors, including Clendening. From such references the historical outline presented below may be amplified.<sup>1-8</sup>

During the first century A. D. Dioscorides described the local application of mandragora to relieve pain, and the preoperative administration of draughts of this atropine-containing plant to produce sleep. Opium, introduced by the Arabians, was often combined with atropine concoctions by the Salernitan physicians in the thirteenth century. After Paracelsus described the alcoholic tincture of opium (laudanum), the medicinal use of opiates for analgesia was widely followed until modern times.

The practice of distilling alcohol reached Europe from the Arabian alchemists in the thirteenth century. Alcohol was dispensed as a medicine for many years before distilled spirits rivaled wine and beer in common use. Thenceforward, until late in the last century, a drunken stupor was utilized for anesthesia during amputations and similar emergency surgery. After reviewing the clinical reports and many physiological experiments, nineteenth century writers concluded that alcohol was "in many respects unfitted for use in the production of artificial anaesthesia."<sup>9</sup> (p.255)

Nitrous oxide was described by Joseph Priestly in 1772, and its use suggested for surgical operations by Humphry Davy in 1800. The exhilarating properties of "laughing gas," however, dominated the attention of investigators and thrill-seeking young



men. Neither the demonstrations by Henry Hickman in England and France between 1824 and 1828, nor the better known effort by the dentist Horace Wells in the operating room of the Massachusetts General Hospital in 1845, convinced surgeons of the practicality of nitrous oxide anesthesia. This agent, however, became popular for dentistry and other brief surgical procedures soon after ether anesthesia was introduced.

Diethyl ether was produced about 1540 by Valerius Cordus (1515-1544) and his teacher Paracelsus (1493-1541). A mixture of ethyl alcohol and sulfuric acid yielded "sweet oil of vitriol," which was later termed sulfuric ether. Although Paracelsus noted its soporific effects on fowl, ether continued in use only as oral medication for bronchial complaints. However, the other effects were not entirely overlooked. At the beginning of the last century young men frequently amused themselves, as with nitrous oxide, by inhaling ether to enjoy a "jag" and to laugh at the antics of their associates. Such experiences resulted indirectly in the purposeful use of ether to produce anesthesia in 1842 by Doctor Crawford W. Long (1815-1878) at Jefferson, Georgia, and independently by others at Boston a few years later. Long successfully repeated the use of ether several times for surgical excisions in his country practice, but he did not publish his discovery until December, 1849.<sup>3</sup>(Vol. 1, p.310) To Long belongs recognition for the priority and for his continued honorable conduct.

A bitter controversy concerning the discovery and commercial exploitation of ether anesthesia developed between the Boston dentists, William T. G. Morton (1819-1868) and Horace Wells (1815-1848), and the physician and chemist, Charles T. Jackson (1805-1880). Wells publicly attempted surgical anesthesia with nitrous oxide in 1845, but the demonstration failed and he never tried ether. Jackson taught Morton relevant chemical details and suggested a trial of ether in operative surgery. However, Morton probably arranged the preliminary experiments and the public demonstration. On October 16, 1846, Doctor John C. Warren (1778-1856) at the Massachusetts General Hospital permitted Morton to render a pa-

tient unconscious. Then he removed a vascular tumor from the neck without causing pain. Assisting the surgeon was Doctor Henry J. Bigelow (1818-1890). After confirmatory successes with ether, Bigelow reported the discovery to local scientific societies. This resulted in the first professional publication on November 18, 1846. Warren's report followed soon in another number of the *Boston Medical and Surgical Journal*. The international reputation and good standing in the local profession of the senior Warren and his energetic associate Bigelow were largely responsible for the rapid worldwide acceptance of ether anesthesia in operative surgery. Many men contributed to Morton's epochal discovery. Despite his unfortunate disputes over the patent and priority with Jackson and others, the collaborating surgeons in 1846, medical leaders attending the semi-centennial of anesthesia at the Massachusetts General Hospital, and uninvolved historians, gave the principal credit to Morton. Nearly all now agree with Osler's conclusion, "Morton convinced the world: the credit is his."<sup>1-12</sup>

Ether anesthesia spread without delay to cities in the United States and Canada, such as New York, Philadelphia and Montreal.<sup>13, 14</sup> Within two months reports appeared in England, France, and Germany, and soon in other European and Asiatic countries.<sup>2</sup>(pp.101, 117) The scholarly publications of John Snow (1813-1858) and his leadership among practicing anesthetists in London contributed importantly.<sup>15</sup> The significant early advances in general anesthesia, indeed, came from America and Great Britain, where the use of chloroform originated.

Chloroform was discovered in 1831 independently in America, France and Germany. Its anesthetic properties in animals were noted later by Glover in Britain and Flourens in France. James Y. Simpson (1811-1870) of Edinburgh deserves credit for the initial clinical trials and report on chloroform anesthesia in obstetrics and surgery in November, 1847.<sup>2, 3, 7</sup> John Snow recognized the importance of the concentrations of ether and chloroform in evaluating their effects. In Europe and America chloroform anesthesia generally replaced ether in clinical practice, but ether remained popular in the northeastern states. More frequent deaths



were soon observed during induction with chloroform than ether. The later recognition of the hepatotoxic effects of chloroform, and the continued deaths from cardiac complications, resulted in cautionary statements from many scientists and commissions in the latter part of the century. Some writers on anesthesia, however, still recommended chloroform, and many general practitioners used it for obstetrics and surgery through the 1950's.<sup>2</sup>

Later advances in anesthesia have been so numerous that a brief summary cannot include all the important contributions. In 1868 Edward Andrews introduced the use of oxygen with nitrous oxide; this measure to improve the safety of anesthesia was developed by later workers. In 1869 Friedrich Trendelenburg administered an anesthetic to a patient through a tracheostomy. Carl Koller first demonstrated the local anesthetic properties of cocaine in eye surgery in 1884; William S. Halsted used cocaine for regional nerve block the following year; August Bier injected cocaine intrathecally for the purpose of spinal anesthesia in 1898; Alfred Einhorn discovered novocaine in 1899; and Heinrich F. W. Braun introduced this safer substitute in 1905. Other advances included the following: use of pneumatic blood pressure cuff during anesthesia by Harvey Cush-

ing (1901);<sup>16</sup> absorption of carbon dioxide with soda lime by Dennis Jackson (1915); endotracheal anesthesia by E. S. Rowbotham and I. W. Magill (1920-21); cyclopropane by R. M. Waters (1930); vinyl ether by C. D. Leake and M. Y. Chen (1930); thiopental by C. S. Lundy (1935); a satisfactory positive pressure respirator for anesthesia by C. Crafoord (1938); curare for muscle relaxation in anesthesia by H. R. Griffith and G. E. Johnson (1942); caudal anesthesia by R. A. Hingson and W. B. Edwards (1942); and the introduction of halothane after independent contributions by Suckling, Raven-  
tos, and Johnstone (1957).<sup>2, 6, 7</sup>

Only in a few large hospitals and universities were general anesthetics administered and studied by specially interested doctors and chemists during the first century of their use. Ether and chloroform were applied by open drop and saturated cloth methods in home and hospital practice. The surgeon usually preferred the assistance of another physician, but accepted the nearest available person in many cases. Advances in operating room procedures were vividly portrayed by the artist Thomas Eakins (1844-1916). Two famous paintings, "The Gross Clinic" (1875), and "The Agnew Clinic" (1889), indicate his attentive observations. In the earlier scene at the Jefferson Medical College, Samuel D. Gross (1805-1884) was chief surgeon, and Joseph W. Hearn (1842-1917), the anesthetist. The latter was applying to the patient's face a towel saturated with chloroform, or possibly ether. The doctors wore street clothes, the patient was not draped, and a relative was present in the operating room. Hearn served as anesthetist for Gross from 1870 to 1884, but pursued other professional duties before attaining promotion to professor of clinical surgery. Gross reported no serious occurrence from ether or chloroform administration in his relatively large experience. In the second scene at the University of Pennsylvania Hospital, D. Hayes Agnew (1818-1892) was chief surgeon while an intern, Elwood R. Kirby, administered ether by the open drop method. The medical staff wore white surgical gowns, the patient was draped with special attention to the operative field, and no visiting relatives were present. No evidence has come to light that Kirby con-

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tinued an interest in anesthetics. Clearly, progress in the surgical specialty took place during this 14-year period, but little change occurred in anesthesia or the subordinate role of the anesthetist.<sup>17</sup>

The nurse-anesthetist appeared at the opening of the twentieth century. Some nurses reported the administration of thousands of general anesthetics.<sup>2(p.121)</sup> By 1923 nurses filled this role in most American hospitals, although usually physicians held appointments as supervisors of the anesthesia service.<sup>13</sup> The surgeon retained the privilege to delegate the anesthetic administration to any individual.

Although a number of general physicians devoted much of their professional time to the practice of anesthesia, the recognition of the specialty was slow and irregular. In 1900 the specialty was accorded its own clinical responsibilities in Boston. In 1905 the Long Island Society of Anesthetists became the first such group in the United States. Gradually trained physicians replaced the nurse-anesthetists and by the 1920's the number of specialists increased considerably. After 1937 anesthesia was recognized by the Advisory Board of Medical Specialists. The New York Society was incorporated in 1936 under the name of the American Society of Anesthetists. The name was changed to the American College of Anesthesiologists in 1946. This has participated in the growing prestige of the specialty.<sup>3, 13, 18</sup>

Before turning to the development of anesthesia in Oklahoma, surgical practice on the frontier should be recalled. Intrepid doctors, such as Ephraim McDowell, operated without general anesthetics other than opiates and alcohol. These pioneer surgeons deserve commendation along with their brave and sturdy patients. Even after ether and chloroform anesthesia were discovered, some doctors and laymen and a few women in labor feared the possible deleterious effects on the circulation, or regarded the relief of natural pain to be immoral on religious grounds.<sup>19, 20</sup> During the Civil War, of course, supply problems to the field reduced the use of anesthetics on each side, but particularly in the Confederate Army.<sup>21</sup> An-

esthetics were administered in only 8,900 cases out of 80,000 major surgical procedures in the Union Army. Thirty-seven deaths were ascribed to chloroform in 6,784 cases, and four deaths to ether in 1,305 cases (5.4 deaths per 1,000, and 3.0 per 1,000 cases, respectively). Reference was made to only two deaths from chloroform in the Confederate Army, but detailed statistics were not preserved.<sup>19, 21</sup>

In the areas of New Orleans, San Antonio, and the mining towns of California, chloroform was commonly used during the 1850's.<sup>20, 22, 23</sup> Although chloroform anesthesia was practiced in the hospitals of Kansas during 1850-1870, the country doctor usually relied solely on large doses of whiskey.<sup>24</sup> A little later, however, Robert B. Pusey, a country practitioner near Elizabethtown, Kentucky, used chloroform anesthesia. For the administration, he was often assisted by his young son. Occasionally before 1890, this doctor also injected cocaine locally.<sup>25</sup>

The development of anesthesia in Oklahoma paralleled the changes on the American frontier. When general anesthesia was introduced in 1846, all of present Oklahoma was Indian Territory. Except for Indians and intermarried whites, only military personnel, missionaries, and a few government traders occupied the sparsely settled lands. Native medicine men, the military post surgeons, and a few of the missionaries answered the local medical calls.

At the close of the Civil War an influx of "doctors" reached the nations in the eastern part of Indian Territory. Most of the newcomers, however, were incompletely trained apprentice physicians or "quacks" (irregular practitioners or frauds). Because of lack of training and supplies, these doctors probably performed amputations and other emergency surgery without anesthetics except for opiates and alcohol.

The Indian Territory Medical Association was founded at Muskogee in April, 1881. The charter members were graduates of medical colleges approved by the American Medical Association. Benjamin F. Fortner (1847-1917), a medical graduate of Nashville University, was the first president of the Territorial Association. As a surgeon in



Vinita, he continued to be a leading figure in medical organization in Oklahoma.<sup>26</sup> After 1889 the runs into Oklahoma Territory rapidly brought other pioneer doctors into the western part of the state. Surgical operations were performed by such men as Fortner, Francis B. Fite, John S. Fulton, LeRoy Long, Fred S. Clinton, E. N. Wright, Virgil Berry, in the eastern region, and W. R. Thompson, John A. Hatchett, Fred H. Clark, A. L. Blesh, J. B. Rolater, John L. Carson, in the west.

Whenever possible, another practitioner assisted the surgeon with the anesthetic. Sometimes this relationship became a regular custom; for example, J. L. Blakemore always gave the anesthetics for F. B. Fite at Muskogee, and E. O. Barker for L. A. Hahn at Guthrie. Several doctors recalled the administration of chloroform by inexperienced bystanders at the scenes of train wrecks and other emergency operations in the country. Doctor Berry remembered no complications from anesthetics administered by his wife.<sup>27</sup>

Anesthetic practices were discussed at many of the Territorial Association meetings. Doctor E. N. Allen of McAlester mentioned the hypodermic use of cocaine for an excision in 1890.<sup>28</sup> Doctor Fortner reported chloroform anesthesia for the amputation of a leg.<sup>29</sup> The use of chloroform in obstetrics was frequently debated. Though most essayists and discussants advocated the use of chloroform, Doctor Hatchett and a few others reserved the anesthetic for emergency or prolonged cases, because of the belief that chloroform led to postpartum hemorrhage.<sup>30</sup> Doctor S. F. Roberts estimated that about one-half the normal deliveries in country practice in 1900 were accomplished without anesthetics due to the fear of fetal injury and the unavailability of desirable assistants. In the absence of such help, he found the woman in labor to be less apprehensive when she held the chloroform pad herself, although the need for careful medical observation was not reduced.<sup>31</sup>

In the early 1900's the Oklahoma publications reprinted several articles and included other local contributions on anesthesia. The Oklahoma doctors shared in the advances in this field. The subjects discussed included

ether administration, cocaine injections in minor surgery, and the relationship of anesthetics to postoperative intestinal ileus.<sup>32-35</sup> Two papers indicated the beginning of the specialty. Doctor S. M. Hunter of Oklahoma City affirmed that "the surgeon should not be burdened with any responsibility" concerning the anesthetic.<sup>32</sup> Clark, the El Reno surgeon, stated that the surgeon no longer trusted the anesthetic administration to an untrained individual but "desires as his assistant a specialist . . . . To the anesthetist is usually left the choice of the anesthetic to be used and the details pertaining to its administration."<sup>33</sup> Both Hunter and Clark recommended ether because of the lower mortality with it than with chloroform. In this respect, Doctor E. S. Lain recalled that he and other general practitioners near Weatherford used chloroform for routine surgical and obstetrical cases, and ether only when assisting consultant physicians in difficult operations.

Publications by the doctors in Oklahoma during the next decade indicated further advances in anesthesia. At the State Medical Association meeting in 1915, Doctor T. Craig Burns, anesthetist at St. Anthony's Hospital, advocated the use of nitrous oxide-oxygen for induction, and would only add ether cautiously during prolonged operations. Doctor Leigh F. Watson indicated a lower incidence of operative shock following local nerve block, supplemented if necessary by nitrous oxide anesthesia. A lively discussion on the causes of surgical shock followed.<sup>36, 37</sup> At the next Association meeting, Doctor James T. Riley of El Reno reviewed anesthetic techniques and the requirements for the physician-anesthetist. He detailed the preoperative and postoperative care associated with the open drop method of ether administration.<sup>38</sup> Unpublished records and interviews confirm that chloroform was being replaced by other anesthetics in the country towns during this decade. At the same time, practitioners such as Blakemore devoted an increasing part of their time to anesthetic administration for other doctors.<sup>39</sup>

The 1920's brought not only the perfection of endotracheal intubation, but the appearance of nurse-anesthetists to Oklahoma. The Wesley Hospital in Oklahoma City appointed Barbara Whitehead from the Baylor



University School of Nurse Anesthetists in 1919, and she was succeeded by Miss Light as head nurse-anesthetist in 1924. According to John H. Robinson, the surgeon in charge of this anesthesia service, the nurses gave the general, and the surgeons the spinal, anesthetics. In Muskogee, Doctor W. P. Fite started with local infiltration anesthesia in nearly one-half of his surgical procedures but supplemented by general anesthetics if necessary. In the discussion, Doctor P. P. Nesbitt expressed his preference for local anesthesia in minor surgery, but general anesthetics in major operations. Doctor M. E. Sippel of Tulsa advocated the use of nitrous oxide for obstetrics. Sodium amytal as an anesthetic was the subject of an editorial in October 1929, only a few months after its introduction by Lundy.<sup>40-42</sup>

In 1930 three former general practitioners, F. J. Bolend, G. S. Mechling, and C. W. Lemon, confined themselves to anesthesia in Oklahoma City. The first trained specialist, John A. Moffitt, was then appointed anesthetist at the University Hospital, and he served as instructor in anesthesia at the University of Oklahoma School of Medicine. Anesthetics at the other city hospitals were administered by nurses, general practitioners, or physicians preparing for other specialties. For example, the cardiologist, F. Redding Hood, then served as chief anesthetist at St. Anthony's Hospital. At this period there were only a few specialists in anesthesia at St. John's and Hillcrest Hospitals in Tulsa, such as H. B. Stewart, E. G. Wolff, and F. E. Woodson.

Surgeons in the smaller hospitals in cities and in country areas relied either on nurse anesthetists or general practitioners who gave anesthetics for each other. Because of the convenience for the operator in the absence of trained assistants, local anesthesia was advocated by Doctor C. Curtis Allen of Frederick.<sup>43</sup> If the surgeon understood the techniques thoroughly, Doctor Fite recommended local infiltration or spinal injection with novocaine. He admitted that ether was the safest anesthetic in the hands of the practicing doctor, and he urged that other general anesthetics be used only by the

trained specialists in large institutions.<sup>44</sup> Several other surgeons, including LeRoy Long, published papers on the relative merits of the available anesthetics in *The Journal* during this decade.<sup>45-51</sup>

The enhanced place of the specialty in American medicine of this period was supported by the publications from Oklahoma.<sup>52-53</sup> Mechling's first paper dealt with the recently introduced cyclopropane and he and Moffitt published detailed comparisons of results with cyclopropane and other anesthetics in both the local and the national specialty journals.<sup>54-55</sup> The paper in 1940 on the comparative analysis of anesthetics for thyroid surgery by Doctors H. E. Doudna and Mechling appropriately closes this review.<sup>56</sup>

Instruction in this specialty at the University of Oklahoma School of Medicine developed slowly, though not far behind comparable American medical centers. Anesthesia was not taught as a separate course at the Epworth Medical College in Oklahoma City. However, the 1905 *Bulletin* mentioned instruction in the "handling of clinical gases" during a gynecology course. In September 1910 the Epworth group merged with Oklahoma University. The two pre-clinical years in medicine were thereafter taught at the University of Oklahoma in Norman, and the former Epworth faculty assumed responsibility for the two clinical years of the University Medical School in Oklahoma City. In 1912 the Surgery Department offered the first formal course in anesthesia under John M. Alford, a general practitioner in charge of anesthesia at the Rolater Hospital.

Floyd J. Bolend, also a general practitioner, replaced Alford as hospital anesthetist in 1913. After Bolend was promoted to Associate Professor of Medicine in 1923, the anesthesia course was transferred from the surgical to the medical department. Each senior student was required to administer six anesthetics under supervision during one-half a semester. In 1930 the first physician specially trained in this field, John A. Moffitt, was appointed instructor in anesthesia and a separate department was initiated at the Medical School, although Bolend and Moffitt held appointments in the Depart-



ment of Medicine. Now, the requirement for graduation was the administration of twelve anesthetics under staff supervision.

In 1936 the University of Oklahoma Hospital initiated one of the first four resident programs in anesthesia in the United States. Anesthesia was then completely separated from the Department of Medicine, with Moffitt as associate professor, and Mechling and H. S. Shelby the instructors.

In 1938 Doctor Doudna, who had trained in anesthesiology at the Bellvue Hospital, succeeded as chief of the department. Doctors Grace C. Hassler and Lois L. Wells joined the staff before World War II, and Doctor Lewis C. Taylor shortly thereafter. From January 1945 to November 1946, Doctor Albert D. Foster replaced Professor Doudna who was in military service. When the latter entered private practice in 1948, Doctor Howard A. Bennett was appointed to the full time professorship and head of the department. The staff then totaled ten members. Professor Bennett was succeeded in 1955 by Doctor Joseph A. White, and he was replaced by Doctor James A. Cutter in 1966.

In recent years instruction in the theory and practice of anesthesiology has occupied 83 hours for senior medical students. In 1957 Doctor Walter H. Massion was given the first staff appointment for research. Under Professors White and Cutter the Department of Anesthesiology has grown to the present 39 members.

From the concoctions of the ancients through the discovery of general anesthetics in the mid-nineteenth century, the science and art of anesthesiology has now reached a vigorous maturity.

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## State Doctors Oppose Peer Review Plan

A Senate Finance Committee plan to establish a massive peer review program for government health programs has drawn flak from several OSMA committees and officers.

The Amendment authored by Senator Wallace Bennett (R. Utah) would make medical societies primarily responsible to cut medical, hospital and other costs associated with Medicare, Medicaid and other health programs coming under the Social Security Act. Bennett's bill would give medical groups \$100,000,000 annually to operate the program. If organized medicine would choose not to take the responsibility, it would be assigned to other groups such as health departments.

Bennett's amendment passed the Senate Finance Committee by voice vote, but it still must pass the entire Senate and then will go to a House-Senate Conference Committee before it can be enacted into law.

The massive program was branded as an "excessive step" on September 27th by the OSMA Governmental Relations Committee, the Medical Insurance Review Committee, and selected association officers and the chairmen of other OSMA committees. Their recommendation of disapproval will be considered by the OSMA Board of Trustees on October 18th.

Under Bennett's proposal, "Professional Standards Review Organizations" would be established by state and county medical societies to monitor the performance of physicians, institutions and others who provide health services to beneficiaries of Medicare, Medicaid and the AFDC program. The plan would give medical groups the role of reviewing all health services as to medical necessity, conformance with appro-

riate standards of health care, and the propriety of facility used (hospital, nursing home, outpatient, etc.). All elective admissions would have to receive prior approval from the PSRO group and would be checked again before the expiration of the initial period of approval. Emergency admissions would be checked in retrospect against federal standards.

"Norms," as furnished by the federal government to PSRO's would be used as guidelines to determine the appropriate length of stay based on diagnosis and patient age, and also to evaluate the mode of treatment.

The PSRO's would have the power to cut government compensation to institutions and physicians, based on their evaluation of the care given to government beneficiaries. Moreover, the Bennett plan provides that gross offenders may have their government billing privileges suspended or revoked, or could be fined up to \$5,000 as a condition of continued participation.

It was felt by the OSMA groups on September 27th that the Bennett Amendment is not an acceptable interpretation of peer review. Rather than physicians keeping their own house in order through peer review, a practice which has been virtually unique to medicine for many years, doctors would find themselves cast in the role of enforcers of government regulations under Bennett's plan.

It is said that the aim of the Bennett Amendment is to cut institutional costs by 20 percent, a figure thought to be exceedingly ambitious by Oklahoma physicians. Bennett's plan is patterned after two county medical society activities in Californ-

nia, both of which are new and unproven.

Oklahoma physicians who have considered the Bennett plan feel that the claims-paying agencies should be responsible for collecting data and bringing any particular problem to the attention of the OSMA Medical Insurance Review Committee. This approach has been successful in adjudicating disputed physician claims and it does not involve the expense of setting up another data processing activity. In addition, there are strong objections to prior approval of elective admissions.

The American Medical Association testified in general opposition to the Bennett Amendment during Senate Finance Committee hearings since it prefers its version of peer review as contained in the AMA Medcredit Bill. The Bennett measure was also opposed by the American Hospital Association, the American Dental Association and other health groups. □

## Association Offers Aid To American POW's

Doctor Ed Calhoon, OSMA President, has corresponded with the North Vietnamese Delegation in Paris offering medical assistance to prisoners of war held by the Communists.

The message was delivered by two Oklahoma City housewives whose husbands are stationed in Vietnam. Mrs. Judy Schenk and Mrs. Jan Peterson took the Calhoon letter and a petition containing 180,000 signatures to Paris on behalf of an organization called Oklahomans Concern for American Prisoners of War.

North Vietnamese officials in Paris refused to accept the petition from the women, but they did take Doctor Calhoon's letter under advisement.

In the letter, Calhoon expressed concern about the health and welfare



of American Prisoners, especially since the provision of the Geneva Convention regarding international inspection of POW camps was being ignored by the North Vietnamese. He said the OSMA could provide a team of physicians to visit the POW camps if the North Vietnamese would assure safe conduct. The medical leader added that the North Vietnamese should not object to a visitation if the standards of health care are adequate. On the other hand, Calhoon said, if the North Vietnamese are short of personnel or supplies, then the Oklahoma doctors could be of assistance.

Following publicity about the OSMA offer, medical volunteers included William N. Harsha, M.D., Oklahoma City, Charles M. Harvey, M.D., Oklahoma City, and John L. LeHew, M.D., Guthrie.

Similar proposals for professional help were made by the Oklahoma State Dental Association and the OU Medical Center.

Calhoon said the program will depend on the final reaction of the North Vietnamese government and, if agreeable, permission would have to be obtained from the U. S. State Department. □

## Search Committee Named For Med School Head

Names of the 15 persons who will serve on the search committee for a new University of Oklahoma executive vice-president for Medical Center affairs have been announced by Dr. Pete Kyle McCarter, interim OU president.

The committee, composed of Medical Center faculty members and students and representatives of state medical groups, will consider persons for the position and make their recommendations to a selection committee, to be appointed at a later date.

Doctor James L. Dennis resigned as executive vice-president of Medical Center affairs in July to become

vice-president for the health sciences at the University of Arkansas Medical Center at Little Rock.

Doctor John P. Colmore was named interim executive vice-president for Medical Center affairs and interim director of the Medical Center by the OU Board of Regents in July.

Named as chairman of the search committee was Doctor Gordon Deckert, professor and head of the Department of Psychiatry and Behavioral Sciences at the Medical Center.

Other Medical Center faculty members on the committee are Doctor John Bruhn, head of the Department of Human Ecology and professor of community health and human ecology; Doctor C. G. Gunn, professor of medicine, and Doctor Creed Abell, professor of biochemistry and molecular biology.

Medical Center students appointed to the committee include Don Rahhal, fourth-year medical student from Clinton, president of the Student Council; John Ferguson, Oklahoma City doctoral student in parasitology and laboratory practice, vice-president in 1969-70 of the Graduate Student Council, and Miss Ilene Joplin,

senior nursing student from Moore.

Other committee members are Doctor Charles M. Kouri, Chelsea, immediate vice-president of the Oklahoma State Dental Association; Doctor Hillard E. Denyer, Bartlesville, immediate past-president of the Oklahoma State Medical Association; Doctor Ed L. Calhoon, Beaver, president of the Oklahoma State Medical Association; William H. Bell, Tulsa, member of the Board of Directors of the Oklahoma Medical Research Foundation; Doctor A. B. Colyar, Oklahoma City, State Commissioner of Health; Dean McGee, Oklahoma City, chairman of the Executive Committee of the Oklahoma Health Sciences Foundation and second vice-president of the Oklahoma Medical Research Foundation, and Miss Juanita Proctor, Oklahoma City, director of nursing services, Presbyterian Hospital, and member of the Oklahoma Board of Nurse Registration and Nursing Education.

Also on the committee is Doctor Carl D. Riggs, acting provost at OU who is also vice-president for graduate studies and dean of the Graduate College. □

## Two Tulsa Physicians Honored



OSMA Life Certificates were presented to two Tulsa physicians at the regular Quarterly Scientific Dinner Meeting of the Tulsa County Medical Society on September 14th, 1970 at the Hilton Inn in Tulsa. Pictured are Horace H. Porter, M.D., (left) and Eugene G. Wolff, M.D., (right). Lucian M. Pascucci, M.D., OSMA President-Elect, is shown making the presentations.



## MacLeod Named President Of Research Foundation

An internationally known scientist has been named President of the Oklahoma Medical Research Foundation. Doctor Colin MacLeod, consultant to President Nixon's Science Advisory Committee and research professor of microbiology at New York University School of Medicine, will assume the position immediately. His selection ended a seven-month long effort by a search committee which screened 80 candidates for the position.

In making the announcement, Mr. Ben C. Wileman, chairman of the foundation's executive committee, said, "We are convinced the selection of this distinguished scholar, physician, and scientist was the best possible choice."

"We believe Doctor MacLeod's experience and proven capabilities will produce far-reaching benefits for the Oklahoma Medical Research Foundation," Wileman said.



COLIN MacLEOD, M.D.

Wileman explained that Doctor MacLeod's primary responsibility will be to direct all phases of the foundation's research program which, at present, is concentrated mainly on the studies of cancer, heart disease, basic biochemistry, and neurosciences.

Doctor MacLeod said, "I am very enthusiastic about this new assignment because the Oklahoma Medical

Research Foundation has an excellent reputation in the scientific community."

Doctor MacLeod is widely known as one of this country's foremost microbiologists. His main research interests are infectious diseases, chemotherapy, microbial genetics, immunology, and epidemiology. He is recognized for the discovery of the role of DNA (deoxyribonucleic acid) in biology in 1944 and for the development of a vaccine for the prevention of pneumococcal pneumonia in 1945.

He has been a member of the National Academy of Sciences since 1954 and is a member of its Board on Medicine.

Between 1960 and 1964, Doctor MacLeod was a member of the President's Advisory Committee and continues to serve as a consultant. In 1963 he was appointed Deputy Director of the Office of Science and Technology, executive office of the President of the United States. He is a member of the American Academy of Arts and Sciences.

Doctor MacLeod is also a member

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of the Society for Clinical Investigation, the Association of American Physicians, and the American Philosophical Society.

He is a member of many other professional groups including the Society of American Microbiologists, the Society for Experimental Biology and Medicine, the American Epidemiological Society, and the Infectious Diseases Society of America.

He received the Medal for Exceptional Civilian Service from the Department of Defense in 1964 and holds honorary doctoral degrees from McGill University and New York Medical College.

Doctor MacLeod was born in Port Hastings, Nova Scotia, Canada, January 28, 1909. After receiving his secondary education at St. Francis College, Richmond, Quebec, he began premedical studies at McGill University Faculty of Arts and received an M.D. degree from McGill University Medical School in 1932.

After completing his residency at Montreal General Hospital in 1934, he joined the Rockefeller Institute for Medical Research. In 1941, he became Professor and Chairman of the Department of Microbiology, New York University School of Medicine and served in that capacity for fifteen years before becoming Professor and Chairman of the Department of Research Medicine, University of Pennsylvania Medical School in 1956.

Doctor MacLeod was Professor of Medicine for New York University School of Medicine from 1960 to 1966 when he became Vice-President for Medical Affairs, Commonwealth Fund, New York.

In 1969, Doctor MacLeod became a Research Professor of Microbiology, New York University School of Medicine, the position he now vacates, to become President of the Oklahoma Medical Research Foundation. □

## New Dean for OU School of Nursing

Doctor Eleanor Gray Knudson, R.N., an experienced nursing educator and administrator, has as-

sumed duties as dean of the University of Oklahoma School of Nursing and is studying the possibility of creating a graduate nursing program.

Formerly an associate dean of the University of California School of Nursing at San Francisco, Doctor Knudson's primary goals include restructuring the undergraduate curriculum and exploring the needs for developing a graduate and continuing education program. She will also guide planning of a new nursing school building in the Medical Center complex in Oklahoma City.

"My first job will be to survey the need and support for a truly innovative graduate nursing education program designed to serve not only the needs of this state but the surrounding area," she said.

Nurses seeking graduate education now frequently go to Colorado or California for such training. Often when students must leave the state they never return and are lost as health manpower.

Doctor Knudson's plans for undergraduate curriculum restructuring include both the two years students spend on the Norman campus and the two professional years spent at the Medical Center.

The proposed new program will be aimed at providing earlier patient contact and introduction of the health team approach for more comprehensive health care derived by working more closely with other health related professions.

Doctor Knudson would like the curriculum to stress the total involvement of the patient, his family and the community in health care and in the preventive aspects of health care.

"All too often the preventive aspect of health delivery systems is given a lower priority than the curative," she said. "Any new curriculum must strive toward a more realistic balance if it is to meet current and future health needs."

Doctor Knudson was assistant professor and chairman of graduate community health nursing education in the University of California School of Nursing from 1965 to 1968, when she was promoted to associate professor and associate dean.

She received her diploma at the Presbyterian Hospital School of Nursing, Philadelphia, in 1940, a Bachelor of Science degree in public health nursing at the University of Oregon, Portland, 1960, a Master of Science degree in the same field from the University of California at San Francisco, 1962, and a Doctor of Public Health in administration from University of California at Berkeley, 1966.

In addition to membership in several nursing organizations, Doctor Knudson is a member of the League of Women Voters.

Doctor Knudson succeeds Helen Patterson, R.N., who resigned from the deanship but remains on the faculty as a professor of nursing. □

## DEATHS

EDWARD F. STEPHENS, M.D.  
1882-1970

Retired, Norman physician, Edward F. Stephens, M.D., died September 29th, 1970. The 88-year-old doctor had practiced in Norman for 46 years. Born in Whitley City, Kentucky, Doctor Stephens graduated from the Grant University School of Medicine in Chattanooga in 1907.

In 1959, the Oklahoma State Medical Association awarded Doctor Stephens a Fifty Year Pin for over a half-century of medical practice.

RAYMOND G. RAY, M.D.  
1907-1970

A Tulsa surgeon, Raymond G. Ray, M.D., died September 10th, 1970, in Tulsa. Doctor Ray was a graduate of the University of Oklahoma School of Medicine and had resided in Tulsa for 46 years. He was certified by the International Board of Surgery, a Fellow of the International College of Surgeons, and a Senior Fellow of the Southwestern Surgical Congress. □



## Microwave Oven Warning Issued

Microwave ovens, one of today's most convenient appliances, are not without an element of danger. Numerous warnings have now been issued regarding microwave leakages.

A microwave oven can cook a five pound roast in 37 minutes, but if it is defective—as some have been reported to be—it may emit dangerous heat waves. In one study of 76 ovens, 25 were found to have excessive microwave leakage. In another test 48 of 58 ovens tested showed leakage, and in nearly half of these the leakage was considered potentially dangerous.

In its publication "Health Education Service" the AMA said that it is estimated that there are 60,000 microwave ovens currently in use in commercial establishments alone, including hospitals, restaurants and schools. Although no microwave injuries have been reported, the theoretical risk involved demands some precautions. The AMA gives the following five rules:

—Do not allow anyone but an authorized serviceman to repair a microwave unit.

—Have the oven examined periodically for leakage, according to manufacturers instructions.

—Do not allow anyone to remain close to the door while the oven is in operation, because of the risk to eyes in case of a door leak.

—Make certain that the power is off whenever the oven door is open.

—Never operate the oven empty.

According to statements by scientists and other concerned experts, microwaves can cause cataracts and possibly "other adverse biological effects," including skin burn and blood damage.

Perhaps the most insidious aspect of a microwave injury is that it may be painless at the time it occurs. Unlike the open flame which produces pain immediately, microwaves heat deeper tissues where there are fewer nerves. Hence, there may be no sensation of pain until it is too late. ☐

## New Mercy Hospital Due in Oklahoma City



A preliminary sketch shows the new Mercy Hospital in Oklahoma City scheduled to be in operation in 1974. The structure is being designed by Benham-Blair & Associates, Architects-Engineers-Consultants, of Oklahoma City.

A new Mercy Hospital in Oklahoma City is expected to be in operation in 1974.

Construction is scheduled to start in the last quarter of 1971 on the structure being designed by Benham-Blair & Associates, Architects-Engineers-Consultants, Oklahoma City.

Harry Koenig, Jr. project architect, said the seven-story structure will contain about 300,000 square feet of total gross space, and 400 single beds. Koenig said the one-bed concept is being used because it increases cash flow and revenue potential which will amortize the extra cost of single-bed room construction in the short period of eight to ten years.

The 400 patient rooms will be housed in the top five floors of the structure.

The first level will be a supply, process and distribution center which will contain such things as bulk stores, processed stores, precontamination area, pharmacy and the dietary support operation. An automatic cart transportation system will mechanically distribute all categories of supplies and food, and return soiled goods.

The second level is the diagnostic and treatment level. It will contain ten operating rooms, two delivery

rooms, two cystoscopic rooms, an ambulant-casualty suite with four trauma rooms and 12 examination rooms, a fracture room, a cardiac catheterization room, four radiograph rooms, four fluoroscopic rooms, a laboratory, a concentrated care center for post-operative, post partum, and surgical intensive care, a department of rehabilitative medicine, a patient admissions center and administrative offices.

Koenig said cost of the building with equipment will be about \$20 million.

The hospital will occupy a 40-acre site on the southeast corner of Meridian and Memorial Roads in Northwest Oklahoma City.

The present Mercy Hospital near downtown Oklahoma City will be sold when the new hospital is in operation. ☐

## Cancer Forum Planned

The Arkansas-Oklahoma Division of the American Cancer Society will hold their Annual Cancer Forum on March 12th and 13th, 1971, at Fountainhead Lodge, Lake Eufaula. Topics to be covered include: The Basic Science of Cancer; Advances in Palliative Therapy; and, New Trends in Cancer. ☐



## AFL-CIO Slaps Chiropractic

Labor took a healthy slap at chiropractic during September. In prepared testimony before the U. S. Senate Finance Committee, a representative of the AFL-CIO said, "Since neither chiropractic theory nor the quality of chiropractic education equip chiropractors to diagnose and treat patients, the AFL-CIO opposes coverage of chiropractic services in the Medicare program." The AFL-CIO statement was given by Andrew J. Biemiller, Director of the labor groups legislative department, in testimony before the Senate Finance Committee on September 15th. He criticized chiropractic theory, education, and lack of research.

"In over 70 years of existence," the director said, "chiropractic theory has not demonstrated any scientific proof for the theory on which chiropractic practice rests. In fact, chiropractors ignore most of the scientific knowledge about health and medicine which has been painstakingly developed through the scientific process by careful study and objective research but, at the same time, undertake no basic research themselves."

He went on to point out that not one of the twelve chiropractic colleges enjoys accreditation by any recognized education accrediting body in the United States and that many chiropractors now practicing received their degrees by mail order. "Evaluative studies on chiropractic education have expressed grave doubts about the quality of faculty and subjects taught by chiropractic colleges. Many faculty members with only the doctor of chiropractic degree teach a wide variety of subjects such as pathology, dermatology, neurology, ophthalmology, chemistry, etc.—subjects in which they have no particular qualifications."

Biemiller concluded his testimony with six separate objections to coverage of chiropractic services by the Medicare program. His final recommendation read as follows:

"Care of patients should only be

entrusted to those who have a sound scientific knowledge of disease and whose experience and confidence render them capable of diagnosing and treating patients by utilizing all resources of modern medicine. Since neither chiropractic theory nor the quality of chiropractic education equip chiropractors to do this, the AFL-CIO opposes coverage of chiropractic services in the Medicare program." □

## Dallas to Host Southern Medical Meeting

With Dallas County Medical Society as host, the Southern Medical Association will convene its 64th Annual Meeting in Dallas, November 16th to 19th, 1970.

Meetings and exhibits will be housed in the Dallas Memorial Auditorium. Twenty-one Section programs, Student Seminar and over 200 scientific and technical exhibits will be features of the meeting.

Southern Medical Association will have several other medical groups meeting with it conjointly this year. In addition to attending their own scientific specialty meetings, members will participate in a number of SMA's Section programs. Participating will be the American College of Chest Physicians, the Southern Chapter, Radiological Society of North America, the Southern EEG Society and the Southern Gynecological and Obstetrical Society.

For the first time, the association will hold a medical roundtable luncheon featuring topics of interest to all specialties.

For the medical student representatives who will be attending the session, a special seminar has been planned. Cash prizes will be awarded for the top three papers from the junior class representatives and the top three papers from the senior class representatives.

Social highlights of the convention will be the president's reception; president's luncheon; the president's night, alumni reunions and a golf tournament.

Reservations should be mailed directly to the Southern Medical Association, 2601 Highland Avenue, Birmingham, Alabama 35205. □

## OSMA Committee Plans Drug Abuse Seminars

Drug abuse, rapidly becoming one of the nation's most pressing medical problems, will be the subject of regional seminars to be conducted by the OSMA's Committee on Alcoholism and Drug Abuse. Purpose of the seminars will be to disseminate information on the care and treatment of the drug using patient.

Charles E. Smith, Jr., M.D., Chairman of the committee said, "All too often we tend to view drug abuse as a social problem and forget about its medical aspects. During these seminars we intend to give OSMA members medical information which will allow them to properly diagnose and treat the physical aspects of drug abuse."

Prior to the seminars a special subcommittee of the association will draft a "first aid manual for drug abuse." The manual will contain specific recommendations for identifying drug abuse patients, establishing what drugs they are using, and then recommending treatment to "bring them down" softly.

During the seminars the manual will be distributed and presentations will be given by medical personnel familiar with the medical aspects of drug abuse.

The seminars will also be used to prepare Oklahoma physicians to cope with some of the social aspects of the problem. A guideline will be drafted which will instruct physicians in how to work with county medical societies to establish educational programs for parents, high school and junior high students and other interested persons. It will also give information as to how to work with pharmacists, educators, police officials, attorneys and members of the clergy.

The committee on Alcoholism and Drug Abuse feels that a county society approach to public education would work better than a program directed from the state level.

County societies have already been requested by Ed Calhoon, M.D., President of the OSMA, to establish separate drug abuse committees to coordinate county society activities in public education on drug abuse. □



## OSMA Directory To Be Published

The 1971 edition of the OSMA membership directory will be published in late December. Information reply cards will be sent to all members of the OSMA during October so that the directory will contain the most up to date information.

Each year some 3,000 copies of the directory are published and distributed free of charge to all members of the association and, for a nominal fee, to companies that service doctors' offices. The 84-page booklet contains two complete rosters of all OSMA members.

The first roster lists all members alphabetically and gives their office address, office telephone number, year of birth, medical school attended, year of graduation, and specialty or special interest.

The second roster lists all OSMA members by city of practice and gives their name and specialty.

Printer for the 1971 directory will be Colorgraphics, Inc., a division of the Oklahoma Publishing Company in Oklahoma City.

During late October the information reply card will be sent to all members of the association with a letter of explanation. All members are encouraged to fill out the reply card and return it to the OSMA no later than November 15th. □

## H. N. Bussey Ends 62-Year Practice

H. N. Bussey, M.D., long-time general practitioner in the Altus area, retired from active practice on his 85th birthday. His retirement brought to a close 62 years of medical practice.

In a newspaper interview the doctor said, "I worked in the McAlester area in the horse and buggy days. My work was the work of a small country doctor."

He earned his medical degree from the University of Georgia, Augusta Medical Branch, where he was also born. He worked in Georgia for five years before starting his practice in the eastern part of Oklahoma in 1913.

He opened a practice in Altus in 1944. Prior to that he had been in Oklahoma City and earlier in McAlester for nearly 18 years working on coal mine contracts.

Doctor Bussey is a Life Member of the OSMA and holds life-time memberships in the Scottish and York Rites Masonry, and with his division at the University of Georgia.

With a twinkle in his eye the doctor told the newspaper reporter, "When I came to Pittsburg, it didn't have

any cemeteries. When I left it had two." He then went on to explain that when he first got into Pittsburg County all of the land was in Indian reservations and could not be bought. Later, while he was still there, the land was bought and mining companies bought parcels, put a fence around them, and called them cemeteries.

The doctor and his wife will continue to live in Altus during his retirement. □

## Book Reviews

**MEDICAL SUPPLY IN WORLD WAR II**, prepared and published under the direction of Lieutenant General Leonard D. Heaton, The Surgeon General United States Army, Editor in Chief, Colonel Robert S. Anderson, MC, USA, Editor for Medical Supply, Charles M. Wiltse, Ph.D., U. S. Government Printing Office: Washington, D.C., clothbound, 662 pp., with 149 illustrations, 54 maps, and 8 tables. 1968. \$8.25.

The American doughboy in Guadalcanal feels dizzy and chilled. His temperature rises, accompanied by headache and nausea. He is sweating profusely as he is evacuated and diagnosed as having malaria. While he lies in a field hospital, the soldier has confidence that he will be cared for and his expectations for restored health are high. The attending medical officer knows that the Japanese control ninety percent of the world's quinine production. Yet the physician does have available an acceptable and effective substitute—atabrine. The medical officer administers this drug as a basic part of treatment and the soldier in this remote part of the world recovers.

During a bombing raid over Germany an airman gunner receives a severe chest wound from attacking fighter planes of the Luftwaffe. He is given first aid and treated for shock by the crew chief. Upon landing, the airman is admitted directly to surgery in a temporary base hospital. Immediate thoracic surgery saves the serviceman's life and paves the way to full recovery. The pres-

ence of surgical instruments and other operating equipment are indispensable to this success story.

A shaped charge pierces the armor of an American tank in the Sahara. One of the tankers receives a major flesh wound in the thigh and is burned severely as he struggles from the burning hulk. Evacuation is timely, but hemorrhage and burns have severely depleted body fluids. An ample supply of blood plasma at the regimental aid station constitutes the difference between life and death for this soldier.

These examples are typical of the crucial role of medical supply in World War II. This book describes in detail the various aspects of the medical military supply system as it existed during the war. The account is based on hundred of documents—reports, correspondence, directives, and statistical records—generated as the war progressed; and on the recollections and personal narratives of scores of individuals who participated in the various supply activities, in the zone of the interior and in theaters abroad.

The book includes the complicated process of forecasting requirements for global war and planning procurement. It gives an account of the acquisition of raw materials in the face of unprecedented competition, the construction of factories, and the creation of entire industries. It covers transportation from mine or farm or forest to processing plants, from plants to depots, and from depots to the far corners of the



earth, wherever American troops were stationed.

The report is painstakingly compiled. Its accuracy and detail some twenty-five years after the fact are remarkable. Although many of the methods are now dated by modern technology, the book offers good reference to the contemporary medical logistician. Many of the processes and techniques recounted are relevant to today's problems. The Army's organization for massive medical supply is especially pertinent.

As is characteristic of some military documentaries, this report leans, in places, to chauvinism and tends to glorify leaders. Without intending to detract in any way from the heroic deeds and service of many fine officers and men, it must be said that the book is, in certain parts, more patriotic than it is scholarly.

On the other hand, its critiques are straightforward and candid. Perhaps the greatest value of this book for the serious reader lies in its frank discussion of problems and unanticipated difficulties. The report underscores the complexity and magnitude of mobilizing national resources overnight for meeting the enormous medical logistical needs of an eight million man army in the field.

On balance, this report marks a major contribution to the field. It provides a wealth of data useful to medical supply planners and operators. It is especially relevant to students of military medicine. It holds interest and special nostalgia for those members of the Medical Corps who served during World War II. And, finally, it serves as a fitting tribute to the officers and men who served their nation so gallantly during this crisis. *Jephtha W. Dalston*

**PROGRESS IN PEDIATRIC RADIOLOGY**, Volume 2, Gastrointestinal Tract. Edited by H. J. Kaufman. Chicago: Yearbook Publishers, Inc. \$25.00.

This represents the second in a series of volumes dealing with roentgenographic studies in children. This volume deals with the alimentary

tract. Contributors are chiefly from western Europe. In the present volume there are four articles on techniques and the general approach to radiologic investigation of the intestinal tract of the child. A significant effort is given to portal hypertension and finally, there are a number of articles on specific topics which comprise more than half of the book.

Some of the concepts propounded are foreign to standard American thinking and usage, but this is not offered in the way of criticism. The section on the use of diagnostic ra-

diology in portal hypertension by Auvery, Michel and Farge is excellent as is that by Alexander and co-workers who review the problem of ingestion of foreign bodies.

One criticism of this book is the fact that the majority of the reproductions of roentgenograms are reversed in tone—black for white. This is the European style but it can cause minor problems for American readers. The quality of reproduction of roentgenograms is otherwise superb.—*Harris D. Riley, Jr., M.D.* □

## Miscellaneous Advertisements

**OUTSTANDING OPPORTUNITY** for one or two physicians in Southwestern Oklahoma. Two GP's or a surgeon and an internist would be ideal. One physician could expect to gross in excess of \$70,000. Ten-room clinic and equipment for sale at reasonable value of \$61,000; eight-room home for sale at \$46,000. Excellent living conditions, schools, churches and future potential. City has JCAH hospital. This opportunity is available in the immediate future. Contact Key L, The Journal, Oklahoma State Medical Association, 601 N.W. Expressway, Oklahoma City 73118.

**GROUP PRACTICE** for urologist. Established practice, generous fringe benefits, and a comfortable community. Write or call collect Charles R. Gibson, M.D., or R. G. Stoll, M.D., Chickasha Clinic, Inc., P.O. Box 1069, Chickasha, Oklahoma 73018. Inquiries kept confidential.

**E.N.T. or OPHTHALMOLOGIST.** Newly finished office space in the Great Plains Medical Square, Lawton, Oklahoma. Contact Roger Harrison, 1300 McGee, Norman, Oklahoma. Phone 329-4211.

**SELL or LEASE:** Furnished clinic for two doctors. Includes G.E. X-Ray. Established 20 years. Owner taking four-year residency. No down payment. Suitable terms. Will introduce patients. Contact Marie Lane Snow, M.D., P.O. Box 14584, Oklahoma City, Oklahoma.

**FOR LEASE,** space available now in Professional Building at Hartford and Little Lane, Ponca City, Oklahoma. Near medical center and hospital. Will remodel to suit tenant. For further information call 524-5331, Oklahoma City.

**OCCUPATIONAL MEDICINE** specialist needed for career opportunity with major industry situated in Oklahoma. Prefer age 35 to early forties. On-the-job training available for suitable prospect. Write Key K, The Journal, Oklahoma State Medical Association, 601 N.W. Expressway, Oklahoma City 73118.

**FOR SALE:** Please make an offer on the following equipment: Microscope (Spencer 18769), Castle autoclave sterilizer #666, Birtcher electrocardiograph, model #300R, medcolator (medco-sonlator), #MS-2, with treatment table, Westinghouse X-Ray, dictaphone (Edison voicewriter), examining table, complete treatment table, instrument cabinet, two book cases with medical books, EENT chair, cuspidor, Stauffer machine, two hospital beds, operating table, operating light and other miscellaneous office equipment. Contact J. M. McMillan, M.D., 105 South Scraper, Vinita, Oklahoma 74301. □



Dear Auxiliary Members:

Following is the Health Careers Committee Basic Program for 1970-71.

**IT IS A FACT:**

That the *Health Manpower Shortage* is acute in the United States!

That the *Health Industry* will be the nation's largest industry by 1975!

That the need for *Allied Health Personnel* has expanded from one supportive person for each physician to *20 to one!*

That there are over *200 health related occupations* to choose from!

**WHAT CAN THE STATE AND COUNTY AUXILIARIES DO?**

Ten percent of the high school graduates are needed in health vocations.

**WE CAN:**

- a. Promote the use of Health Careers film strips, posters and comic book format for the *LOWER GRADES* in school.
- b. Cooperate with all allied health groups and plan a seminar at the hospital for students and parents in the *INTERMEDIATE GRADES*.
- c. In the *HIGH SCHOOLS AND VOCATIONAL SCHOOLS*:
  1. Promote Health Careers Clubs—programs and field trips.
  2. Improve counseling by guidance counselors, science teachers and career professionals.
  3. Cooperate with *allied health groups* and have a county or regional health careers conference annually.
  4. Encourage work in health facilities of the community.

5. Expand work study programs in which classroom courses are correlated with working experience.

- d. Support two-year community junior colleges and vocational-technical schools with health training programs.

- e. Help the inactive and retired trained health worker to get back in service by promoting refresher courses.

- f. Make better use of the discharged military medical corpsman.

RECRUITMENT, TRAINING AND PROMOTION OF HEALTH CAREERS ARE VITAL ACTIVITIES IN SOLVING THE CRITICAL HEALTH MANPOWER SHORTAGE. WE MUST DO ALL WE CAN, AND WE NEED YOUR HELP!

MRS. RUSSELL L. DETER, Chairman  
Health Careers Committee, WA-AMA

This program of national emphasis in Oklahoma, is under the capable leadership of Mrs. Leslie Williams, 6304 N.W. 21st Street Drive, Bethany 73008. Mrs. Williams will bring you additional information when she visits your district meeting.

The Oklahoma Council for Health Careers is supported in part by our state medical association and our auxiliary.

Excellent recruitment material and program ideas and speakers may be obtained through this council.

Oklahoma Council for Health Careers  
836 N.E. 15th Street  
Oklahoma City, Oklahoma 73105

OUR PHYSICIAN HUSBANDS NEED OUR HELP. Mrs. M. Thomas Buxton, Jr. □



**For the first time in many years, a lame duck Congress will take action on several major pieces of legislation.** Of particular interest to the medical profession is HR 17550, amending the Social Security Act on Medicare-Medicaid. Ordinarily in an election year Congress would adjourn before the November 3rd election. This year a number of bills are left pending and Congress has decided to "recess" and will go back to Washington immediately after the election. This means, no doubt, that some Senators and Representative will be voting on major legislation after they were not re-elected.

**OSMA's Mini Health Fair was a success.** The 35 exhibit fair was held in Shepherd Mall Shopping Center, Oklahoma City, October 8th to 14th. The mall management estimated that 65,000 people saw the fair. Twenty-six health or health related organizations joined with the medical association to stage the week-long affair.

**OSMA's 1971 membership directory is now in preparation.** All members of the association should have received an information-reply card during the middle of October to help the association update its information. All members are urged to return the reply card to the association as soon as possible.

**Medicredit, AMA's answer to national health insurance,** has twenty-four sponsors in the U. S. House of Representatives. Senator Clifford P. Hansen (R-Wyo.) has also introduced Medicredit in the Senate. Oklahoma's John Jarman is one of the House sponsors.

**Medicredit would use private health insurance companies to provide minimum-standard policies to all Americans.** Under Part A, families who pay \$300 or less income taxes a year would receive a certificate from the Federal government with which to purchase an approved policy. Families with higher incomes would come under Part B. They would receive credits against income tax liability to offset the cost of their health insurance. At the low end of the graduated scale, as much as 98 percent of the premium cost would be paid through income tax credits, but families owing \$1,300 or more in taxes a year would be required to furnish their own protection. Estimated cost of Medicredit would be \$10 billion a year.

**Noting that drug abuse is rapidly becoming one of the more serious medical problems** of our time, the OSMA Alcoholism and Drug Abuse Committee is planning a series of regional seminars for physicians on the treatment of the drug using patient. In preparation for the seminars, the committee is drawing up a "first aid manual for drug abuse" to be distributed to all members. The seminars would also be used to prepare physicians to help educate the general public about the dangers of drug abuse. The physicians in attendance would be urged to go back to their home counties and actively seek speaking engagements and to help plan and execute public education programs. Time and place of the various seminars will be announced at a later date.

**According to the Social Security Administration,** Medicare has paid 47 percent of the health care costs of persons over 65 since its inception four years ago. However, the SSA study reported that the private sector still pays the bulk of the cost for personal health care services and supplies for the aged. Statistics showed that the average medical bill for each Medicare recipient was \$692, of which the Medicare recipient paid \$163. Private health insurance and Medicare picked up the balance. □



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symptoms  
that bother him  
most.





## *Caveat Emptor!*

*"... An agreement between parties to a transaction settling what each shall give and receive; ... A thing purchased or purchasable cheaply ..."*

So says the dictionary in defining a 'bargain.'

Immediately it is apparent that none of the various plans for compulsory national health insurance is a bargain. Any 'agreement' which may be arranged will be identical to the agreement which exists between the taxpayer and the Internal Revenue Service ... and just as negotiable. The 'parties' involved can never be identified by other than financial characteristics; those who pay taxes and those who don't. Or perhaps, in this instance, the 'parties' are categorized as those who will receive medical care and those who will provide it ... which is patently a preposterous suggestion since the party providing the care will have no choice in the matter.

There has been some effort on the part of certain politicians and reformers at least, to describe 'what each shall ... receive.' But, since there are no legislative ways to increase the health care resources in a free society, these idealists cannot possibly know how much medical care will be received.

Paying for care is not the only essential in providing it. People must be trained in health care techniques and such training usually is a long and difficult task. Once trained, they must agree to live and work in the geographic areas where their services are needed. Although there has been much rhetoric about improving the health care delivery system in this country, not a single one of the proposed schemes even suggests solutions to the problems of personnel shortages and maldistribution. Obviously if there are no people to deliver medical care, no one can receive it.

Paramount among the unknowns in the schemes for socializing medical care is the question of '... what each shall give ...' There is no price tag available for the prospective buyer. Whether it will cost 40 billion dollars or 100 billion dollars is not ac-

tually known. If the federal cost-estimate of the medicare program can be taken as an example of its talent in this field, it is obvious that the government is thoroughly incompetent to determine 'what each shall give.'

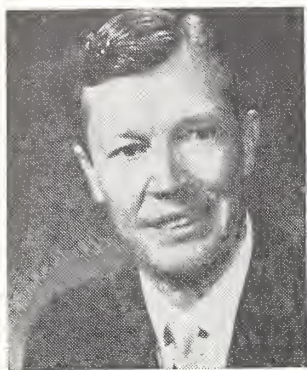
And the '... thing purchased ...' has yet to be defined clearly. Certainly much more than actual medical and hospital care will be bought. There will be tons of paper and miles of printing and acres of stamps and barrels of ink and millions of paper clips, staples, pens, pencils and typewriters, all purchased as non-optional accessories. Also we will buy the services, good and bad, of several hundred thousand secretaries, typists, file clerks, accountants, receptionists, directors, assistant directors, claim investigators, interviewers, supervisors and janitors. We will buy, rent and lease buildings, offices and warehouses. We will pay monthly charges for thousands of telephones, millions of kilowatt hours of electricity, cubic feet of gas, gallons of water, tons of coal and barrels of oil. All of these things, and more, will be bought and paid for as hundreds of offices are set up or enlarged to administer a tax supported, national health program. If there were a law requiring a list of contents for 'the thing purchased,' all these items would need to be identified.

The only remaining portion of the definition of the word bargain is '... purchased cheaply ...' Even compared to the defense budget the price for a national health-care program will not be cheap. It is entirely possible that, in the foreseeable future, it will emerge as the single most expensive function of government.

Whatever else tax supported compulsory national health insurance might be, it is *no* bargain. In fact, since the cost is unknown, the contents are unspecified and the effectiveness has not been demonstrated, it shouldn't be allowed on the market.

Please call these facts to the attention of your local and national consumer protection organization. *MRJ* □





The more I observe, visit and listen the nearer akin most of our professional thinking seems. As I travel over the state visiting various county societies I am impressed by the good job physicians are doing in caring for their patients. We

are overworked and do not have the necessary time to devote to our county and state medical societies.

The impact of Federal regulations has evolved so insidiously we may come to assume as necessary that great amount of time required for these regulations without reflecting on how this time was more wisely and economically spent in yesteryear. Pause if you will and reminisce on the practice which was not so concerned with threat of litigation nor dulled by voluminous records, but was the simple fee for service arrangement between physician and patient.

I sincerely believe yesteryear's patient received better-oriented, more alert, keener response because of the time-honored theory—"A Day's Work for a Day's Pay." When government stepped between patient and physician, long standing traditions of dedicated effort and appreciative response were bilaterally lost. This type of mutual respect is not purchased by monetary recompense.

Medicare and Medicaid have taken their

toll in many ways; creating dissent and augmenting differences of opinion which gradually fragment a workable and compact medical profession. Never have we needed to be more united. Younger physicians, not having had previous contact with organized medicine, tend to work in their own spheres of specialty medicine and neglect contact with more broadly organized groups. Recently we have tried to bridge the gap with various specialty groups and attune our thinking toward common goals of unification. All state organizations have this common problem and are striving for workable solutions.

Recently your Medical School Liaison Committee met with a group of interested students discussing participation by the medical students in state medical affairs, hoping to inspire future work within our state society. Your Committee on Alcoholism and Drug Abuse is a common ground for our unified efforts in soliciting all men in medicine and thereby aiding each other.

All people in and out of medicine are acutely aware of the shortage of family physicians, and our Rural Medical Council solicits the aid of specialty groups to see that we attain our goals of improving the supply and distribution of these important practitioners.

No Committee is so big nor meetings so well attended that we can't use the advice of another interested physician. □

Sincerely and fraternally,

*E. L. Carlson M.D.*



# The Association of Cigarette Smoking With Respiratory Symptoms and Pulmonary Function in a Group of High School Students

WHITNEY W. ADDINGTON, M.D.  
R. LEROY CARPENTER, M.D.  
JOHN F. McCOY, Ph.D.  
KAREN AKINS DUNCAN, Ph.D.  
KENNETH MOGG

*Despite a relatively brief smoking history respiratory symptoms were significantly more frequent in high school students who reported that they smoked cigarettes than in those who did not. No significant differences in pulmonary function were observed between cigarette smokers and non-smokers of the age-group studied.*

**AN ADVISORY COMMITTEE** of the Surgeon General<sup>1</sup> reported that cigarette smoking is the single most significant cause of chronic obstructive lung disease and noted the lack of studies of the natural history of the disease. There are only a few studies which attempt to determine the age of onset

of the increased respiratory symptoms and the air flow obstruction characteristic of chronic obstructive lung disease. The British Medical Research Council has reviewed respiratory illnesses in British and overseas students attending United Kingdom Universities.<sup>2</sup> It found a higher frequency of respiratory tract infections in smokers in both groups of students at each age studied. In a class of student nurses a significantly higher incidence of respiratory infections was found in the cigarette smokers than in the non-smokers.<sup>3</sup> College students who smoke cigarettes have been found to have a significantly greater frequency of respiratory symptoms.<sup>4</sup> Smoking in college-age groups has been found<sup>4-6</sup> to be associated with some but not all the pulmonary function abnormalities of older patients with chronic obstructive lung disease.

Surveys have found that teenage cigarette consumption is considerable. While a few children begin the cigarette smoking habit before high school, all surveys have found a rapidly increasing percentage of cigarette smokers during the high school grades. In one survey,<sup>7</sup> 46 percent of the females and 55 percent of the males were regular cigarette smokers by the time they reached the twelfth grade. Other surveys<sup>8,9</sup> have found between 40 and 50 percent of twelfth graders to be regular cigarette smokers. There has been one study<sup>10</sup> of the effect of cigarette

From the Division of Epidemiology, Oklahoma State Health Department; The Departments of Medicine, Preventive Medicine and Public Health, Biostatistics and Epidemiology, and the Computer Facility, University of Oklahoma Medical Center; and the Research Service, Veterans Administration Hospital, Oklahoma City, Oklahoma.

This work was supported in part by PHS Research Grant A1-07618.



smoking upon respiratory tract infections in a group of male high school students aged 14 to 19 years in which 48 percent were regular cigarette smokers. Respiratory tract infections were found to be significantly more frequent in the smoking group than in the non-smoking group. In another study,<sup>11</sup> children in primary and secondary school who smoke were found to have more respiratory symptoms than those who do not smoke.

The present study was undertaken to investigate whether cigarette smoking is associated in high school students with increased respiratory symptoms and airflow obstruction similar to those found in adult cigarette smokers.

METHOD

*Population of study:* The ninth through twelfth grades of Northeast High School of Oklahoma City, Oklahoma, were asked to volunteer for the study. Table 1 lists the school's census by sex and by race with the number of students in each group who volunteered.

*Procedures:* Each class of the school was informed that the study was a lung function survey. The students were assured of anonymity before volunteers were assembled from the classrooms. Two interviewers administered a questionnaire, which was an abbreviated and modified version of the British Medical Research Council's Questionnaire on Respiratory Symptoms.<sup>12</sup> The questions were asked precisely as they were written in the questionnaire. If the respondent expressed doubt about the meaning of any question, the question was repeated. If doubt remained, the answer was recorded as "no." A "yes" an-

swer to either the cough or the phlegm question was recorded if the symptom was present on four mornings, or nights, per week. Any subject who had smoked an average of one cigarette per day during the past year was categorized as a smoker. A Collins timed vitalometer<sup>13</sup> was used to measure vital capacity and the forced one second expiratory volume (F.E.V.<sub>1.0</sub>). After instructions and an initial practice try, three timed vital capacities were obtained on each volunteer. The greatest vital capacity and F.E.V.<sub>1.0</sub> of the three attempts were selected for use in the study. Each subject's height and weight were then measured.

There were no significant differences between interviewers with respect to the number of students and the race, sex, age, smoking habits, and respiratory symptoms of the students they interviewed. Because almost all of the cigarette smokers reported minimal and brief cigarette smoking, it was not possible to determine whether respiratory symptoms or pulmonary function were different in the very few students who reported heavy or prolonged cigarette smoking.

RESULTS

Of the 557 students studied, 126 (23 percent) were found to be cigarette smokers. Table 2 classifies the study's sample and the number of cigarette smokers by age, sex, and race. A higher percentage of smokers among males was reported in the two younger age groups, with a higher percentage among females in the three older age groups. In all age groups there was a higher percentage of smokers among Caucasians than among Negroes.

Table 3 presents the 13 respiratory symptoms for which information was requested in the interview and the number of affirmative answers by the 126 cigarette smokers and 431 non-smokers. There was a greater incidence of the first eleven respiratory symptoms in the cigarette smoking group than in the non-smoking group. Almost identical percentages of smokers and non-smokers responded affirmatively to the final two symptoms, wheezing or asthma and sneezing or hay fever.

Table 1  
TOTAL CENSUS AND STUDENTS STUDIED  
CLASSIFIED BY SEX AND RACE

	Census	No. Studied	% Studied
Total	737	557	76
Male	273	140	51
Female	424	417	90
Caucasian	368	307	83
Negro	369	250	68



Table 2  
SMOKING HABITS OF STUDENTS STUDIED  
CLASSIFIED BY AGE, SEX, AND RACE

Age Groups	MALE			FEMALE		
	Cau-casian	Negro	Total	Cau-casian	Negro	Total
13, 14, 15						
No. Studied	11	4	15	75	59	134
Smokers	4	1	5	20	12	32
% Smokers	36	25	33	27	20	24
16						
No. Studied	14	9	23	67	70	137
Smokers	3	2	5	18	10	28
% Smokers	21	22	22	27	14	20
17						
No. Studied	15	16	31	48	35	83
Smokers	2	1	3	17	5	22
% Smokers	13	6	10	35	14	27
18, 19						
No. Studied	43	28	71	34	29	63
Smokers	8	2	10	12	9	21
% Smokers	19	7	14	35	31	33
Total						
No. Studied	83	57	140	224	193	417
Smokers	17	6	23	67	36	103
% Smokers	20	11	16	30	19	25

The cigarette smokers and non-smokers were subdivided into groups by age, race and sex. The increased prevalence of the first eleven respiratory symptoms in the cigarette smokers was uniformly present in each age group, in both races and in each sex. In all subgroups no appreciable differences were found between the smokers and non-smokers who admitted to the final two respiratory symptoms, wheezing and sneezing.

A summary of the statistical analysis of the respiratory symptom data is presented

Table 3  
RESPIRATORY SYMPTOMS IN SMOKERS  
AND NON-SMOKERS

Respiratory Symptoms	Smokers (126)		Non-Smokers (431)	
	No.	% Yes	No.	% Yes
AM Cough	27	21	47	11
Daily Cough	37	29	85	20
Daily Cough for 3 mos.	12	10	18	4
AM Phlegm	34	27	84	19
Daily Phlegm	30	24	55	13
Daily Phlegm for 3 mos.	11	9	15	3
Dyspnea before friends	49	39	94	22
Dyspnea when hurrying	38	30	68	16
Dyspnea when walking	4	3	10	2
Chest Cold for 1 week	38	30	96	22
Chest Cold for 3 weeks	12	10	23	5
Wheezing or asthma	16	13	51	12
Sneezing or hay fever	46	37	164	38

in Table 4. If a subject responded affirmatively to at least one of the cough questions, he was categorized as having responded "yes" to cough. There was similar categori-

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*R. LeRoy Carpenter, M.D., a graduate of the University of Kansas School of Medicine, is Chief of Personal Health Services at the Oklahoma State Health Department and Assistant Professor of Medicine and Community Health at the University of Oklahoma School of Medicine. He is a member of the American Thoracic Society and the American Public Health Association.*

*John F. McCoy, Ph.D., received his degree in Preventive Medicine and Public Health (Biostatistics) from the University of Oklahoma Medical Center in 1966. He is currently Chief of the Veterans Administration Southern Research Support Center and Assistant Professor of Biometry at the University of Arkansas Medical Center. Professional societies to which he belongs include the American Statistical Society, the Association for Computing Machinery and the American Public Health Association.*

*Karen Akins Duncan, Ph.D., received a Doctorate in Biostatistics from the University of Oklahoma in 1970. She is currently Assistant Professor of Biometry at the Medical University of South Carolina in Charleston.*

*Kenneth Mogg is presently a senior in the University of Oklahoma School of Engineering. He is planning to do graduate studies in bioscience engineering. He was formerly research associate in the pulmonary laboratory of the Oklahoma City Veterans Administration Hospital.*



Table 4  
SUMMARY: STATISTICAL ANALYSIS OF  
RESPIRATORY SYMPTOM DATA

	Smokers (126)		Non-Smokers (431)		X <sup>2</sup> p
	# Yes Responses	%	# Yes Responses	%	
Cough	52	41	113	26	<.005
Phlegm	49	39	116	27	<.025
Dyspnea	60	48	118	27	<.001
Chest Colds	41	33	106	25	>.05
Asthma or Hay Fever	50	40	186	43	>.05

zation for phlegm, dyspnea, chest colds, and asthma or hay fever. For each symptom the proportions of smokers and non-smokers that responded "yes" were compared using the X<sup>2</sup> test. The proportions were significantly different for cough, phlegm, and dsypnea, but were not different for chest colds and asthma or hay fever.

The results of the pulmonary function tests are summarized in Table 5. There was no significant difference between the distributions of heights of the smokers and non-smokers. The differences in the mean vital capacity and the mean F.E.V.<sub>1.0</sub> of smokers and non-smokers classified by sex were compared using Student's t-test and were found to be non-significant.

DISCUSSION

The census data listed in Table 1 reveal that Northeast High School has considerably more females than males, 464 to 273. Legal and sociological considerations help explain this imbalance. Under Oklahoma law a work permit cannot be issued to an individual under the age of 16. However, once an individual has reached his sixteenth birthday

he may request a work permit which allows him legally to withdraw from school. Illegal male withdrawal is a sociological problem of unknown magnitude at Northeast High School.

In Table 1 note that 90 percent of the female population volunteered to participate in the study while only 59 percent of the males did. Only 68 percent of the Negro students participated, compared with 83 percent of the Caucasians.

It is clear that male nonresponse, particularly Negro, was a significant problem in our survey. In nearly all surveys some individuals are unavailable or unwilling to participate. In the present study, the nonresponse probably was due to unwillingness to participate, rather than unavailability, because the school does check attendance at each class throughout the day. There were probably several reasons for the limited male participation. One reason might have been the reluctance of the male cigarette smoker to take part in a study which he thought might reveal his smoking habit, although it is unlikely that this would be true of male but not female students. A second reason might have been that the Negro males did not feel comfortable in the interview setting. Both interviewers were white and the highschool's neighborhood was changing in racial composition.

Other surveys reported in the literature have consistently found the proportion of highschool cigarette smokers to increase with age.<sup>7-10</sup> As seen in Table 2, no such marked progressive increase occurred in the present study. In addition, the amount of reported cigarette smoking in our sample was considerably lower than that found in other surveys. Despite a possibility that the

Table 5  
MEAN VITAL CAPACITY AND F.E.V.<sub>1.0</sub> IN SMOKERS AND NON-SMOKERS

		Smokers	Non-Smokers	t-test p
Males (140)*	V.C.	3.90 ± 0.70 (23)	3.90 ± 0.70 (117)	>.05
	F.E.V. <sub>1.0</sub>	2.79 ± 0.55	2.91 ± 0.65	>.05
Females (417)*	V.C.	2.90 ± 0.53 (103)	2.88 ± 0.51 (314)	>.05
	F.E.V. <sub>1.0</sub>	2.15 ± 0.50	2.17 ± 0.44	>.05

Note: Mean ± standard deviation  
\*Numbers in brackets refer to the number of subjects in each respective category.



students minimized their smoking habits, there was no apparent reason to suspect the truthfulness of their replies to the respiratory symptom questions. It follows that if a number of cigarette smokers were classified non-smokers because they lied, the resulting bias would have decreased the respiratory symptom differences between smokers and non-smokers.

Although bias due to nonresponse and untruthfulness are admitted possibilities, the results of the study are still of considerable interest. The respiratory symptoms relating to cough, phlegm, dyspnea, and colds which were found more frequently in the cigarette-smoking highschool students in this study, are the same symptoms which have been found to be increased in adult cigarette smokers.<sup>11</sup> It is of greatest interest that these respiratory symptoms should be present after such minimal and brief exposure to cigarette smoking. No significant differences were found between the cigarette smoking and non-smoking students for the final two respiratory symptoms, those relating to asthma and hay fever. Thus, our findings are consistent with the concept that cigarette smoking does not increase the incidence of these two diseases.

There was no significant evidence of air-flow obstruction in the smokers. It is not known whether bronchitis without air-flow obstruction progresses to the air-flow obstruction of the chronic obstructive lung diseases, chronic bronchitis and emphysema, although one retrospective study<sup>14</sup> suggests that it does. The present study suggests that a prospective investigation of this question and of the relationship between cigarette smoking and chronic obstructive lung disease would need to begin with highschool age subjects.

#### SUMMARY

Cigarette smoking has been suggested to be causally related in the adult to chronic obstructive lung disease, but there is little

data on the effects of cigarette smoking on teenagers. Five hundred fifty-seven out of 737 students of an Oklahoma City high school were surveyed for respiratory symptoms and their pulmonary functions measured. Despite the minimal and brief cigarette smoking reported by most students, significant differences were found between cigarette smokers and non-smokers in the sample studied. Respiratory symptoms were significantly more frequent in the students who reported that they smoked cigarettes than in those who did not. No significant differences in pulmonary function were observed between cigarette smokers and non-smokers. The data presented strongly suggest a prospective study of the relationship between cigarette smoking and chronic obstructive lung disease would need to begin with highschool age subjects. □

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# Irritable Colon Syndrome: The Most Common Gastrointestinal Affliction

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*The irritable colon is frequently confused with more serious disorders and, even when diagnosed correctly, is frequently overtreated. An awareness of this syndrome, its protean manifestations, and its appropriate evaluation will help the physician alleviate patient anxiety and obviate iatrogenic exacerbation of the condition.*

## INTRODUCTION

THE IRRITABLE COLON syndrome may occupy as much as 50 to 80 percent of a gastroenterologist's practice.<sup>13</sup> It consists of a group of disturbances in motility and secretory function of the colon in the absence of organic disease. Various rare diseases receive considerable attention while many aspects of the irritable bowel go relatively unnoticed.

The syndrome has a long history and has been described by a variety of names. Perhaps the earliest reference to the irritable colon can be found in a paper by Da Costa<sup>10</sup> in 1871 where he reported seven cases of

"membranous enteritis" and abdominal pain, followed by discharge of skins or membranes, sometimes coming off in the shape of moulds or long tubes. Charles Ball (1887)<sup>1</sup> used the term "irritable rectum," mentioning a clergyman who always desired to defecate before divine service. Other terms have been mucous colitis, catarrhal colitis, membranous colitis and neurogenic mucous colitis. Much of the previous confusion may have been secondary to a lack of more modern diagnostic studies. Patients thought to have functional disease frequently were later found to be suffering from ulcerative colitis, Crohn's disease, carcinoma or other diseases.

## INCIDENCE

Most patients range in age from 20 to 60 years; the incidence rises rapidly in the 20's, then plateaus out to the 60's and 25 percent have had symptoms for ten or more years. Women suffer with irritable colon twice as often as men. In men it is most common in the 40's and de novo development of symptoms after age 50 is considered unusual. The diagnosis is uncommon under age 20 or over age 60. Those beyond 60 who present with persistent diarrhea, constipation or abdominal pain usually have an organic basis for their complaints.

## CRITERIA FOR DIAGNOSIS

The diagnosis of irritable colon syndrome is frequently one of exclusion based on a symptom complex rather than definite clin-

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ical criteria. The lack of objective findings contributes to the diagnosis. Generally three conditions are required: 1.) A history of bowel disturbance which is constant or intermittent, usually taking the form of constipation or diarrhea; 2.) Abdominal pain, frequently related to bowel dysfunction; 3.) Absence of radiologic, bacteriologic, pathologic and biochemical abnormality.

#### ETIOLOGY AND PATHOPHYSIOLOGY

The cause of the irritable colon syndrome is unknown and may conceivably be as diverse as its manifestations. There appear to be several pathophysiologic categories. 1.) Post-dysenteric or post-infectious: This may be a common situation considering the world-wide incidence of dysentery. In England 25 percent of all cases of irritable colon have been reported to be post-infectious.<sup>2</sup> Some investigators believe that encysted parasites may persist and cause neuromuscular irritability, or that previous active infection results in a prolonged disorganization of bowel muscle function. 2.) Constitutional: An "inborn" irritability of intestinal smooth muscle is suggested by the frequency of a long history of abdominal complaints dating back to "colic" as a child, or having a "nervous stomach" since childhood. 3.) Post vagotomy: Some post-operative ulcer patients develop an interesting picture with symptoms indistinguishable from irritable colon syndrome. It appears to be troublesome in only two to three percent of patients, and even then is rarely serious. Two types have been described, the first showing an increase in stool frequency when compared to the pre-operative state, the second showing episodic diarrhea and urgency. In the latter, episodes last about three days and occur from twice a month to every three months. The cause is obscure and therapy is often surgical (involving a correction of existing pathologic anatomy, e.g. converting a Billroth II to I, or reversing a loop of intestine). 4.) Secondary: Here the clinical picture becomes more complex and irritable colon is associated with elements of duodenal ulcer, gall bladder disease, pelvic disease, post-cholecystectomy syndrome and biliary dyskinesia. 5.) Laxative habit: As many as eight

to 22 percent of patients suffering from irritable colon may use laxatives on an occasional or regular basis.<sup>2</sup> There are no good statistics on the frequency of the laxative habit in the general population so laxative abuse is difficult to assess as a primary cause of irritable colon. 6.) Emotional: Connell<sup>8</sup> attributes little importance to emotional problems as a factor in the irritable colon syndrome. He believes such patients have no more disturbance than expected from normal members of the community: "It is likely that there is a genuine clinical basis for the disturbance of function, but where life stress intrudes the symptoms become less tolerable or form the basis for a hysterical reaction to the stress." Heffernon<sup>12</sup> believes that conditions such as irritable colon, headache, and low back pain have a definite relationship to stress and represent a complex interaction between the patient's inner neuropsychological world and the larger less adaptive external world. His "fluctuating clinical state" reflects an ongoing struggle to control and adapt to the external world. Grace, Wolf and Wolff<sup>11</sup> demonstrated the fluctuating functional activity of the colon in their studies of patients with exteriorized bowel. In a subject who felt resentment toward the investigators the colon became hyperemic, narrowed and shortened. A different subject felt intense fear wherein the bowel became more slack, the mucosa paler.

Patients' reactions to stress as mediated by the autonomic nervous system have been postulated to be the result of long standing patterns of behavior response which the individual has used in the past (often successfully) to achieve homeostasis, including some degree of predictability and control over the environment. When the manner of reacting to environmental stress becomes inflexible and systematized, it is more likely to elicit somatic symptoms which can result in a functional disorder of the gastrointestinal tract. More usual, mild, transient symptoms may represent the "normal" response to stress, such as the anorexia, tachycardia, pallor and diaphoresis accompanying severe fright reactions. Persistent stress or unresolved emotional conflict may create a recurring pattern of symptoms.

Psychoanalytic theory may offer some ex-



planations for the overwhelming frequency of the intestinal tract as a focus for stress reactions. In the earliest phases of psychosexual development, second to the skin as a mediator of environmental stimuli, the gastrointestinal tract is one of the infant's earliest means of communication with the external world. The infant's feeding is often associated with tenderness, love, warmth, satisfaction, security and predictability, but can also be influenced by the mother's tension, anxiety, resentment and frustrations. The period of toilet training affords another major means of communication and control of environment. Performance can be rewarded with love, or affection withheld for lack of performance. Rigid training patterns may create obstinacy, anger or strict compulsive behavior patterns which make flexible bowel habits nearly impossible. In addition, the atmosphere of meal time may influence digestion and could possess some relationship to digestive complaints in later life.

A special interview to investigate possible psychological factors was given to each of the 140 irritable colon patients studied by Chaudhury and Truelove.<sup>2</sup> Eighty-six percent of women and 65 percent of men experienced difficulty of diverse nature. Females were more frequently involved in stress related to families (marital difficulties, anxiety over children, relationships to parents) and there appeared to be few sexual problems. Men suffered more from nervous strain related to their employment. An absence of financial worries was a conspicuous part of the study; these patients appeared to live strictly within their financial means. However, the ability to elicit significant psychosocial information from one interview is suspect.

Mendeloff, *et al.*<sup>15</sup> found that patients with irritable colon had significantly more preceding life stresses and a more striking past history of major illness than did the general population or patients with ulcerative colitis.

Further insight into the pathophysiology of the irritable colon syndrome has been achieved through colonic pressure studies. Inflatable balloons inserted into the sigmoid colon have been used to record colonic mo-

tility, but because of excessive artifact, particularly related to body movement, water filled polythene tubes have been substituted. Normal subjects show predominantly simple waves of low amplitude and short duration<sup>3</sup> as well as larger and longer waves less frequently detected which defy neat classification. Patients with irritable colon who have lower abdominal pain as their main symptom show hyperactive basal patterns while symptomatic and normal patterns when symptom free. Eating increases motility by about 50 percent in normal subjects. Patients with postprandial irritable bowel symptoms have high levels of motility under resting conditions,<sup>9</sup> while food ingestion causes symptoms accompanied by grossly exaggerated colonic motility.

Normal subjects given a one mg. dose of prostigmine have a colonic motility pattern resembling the resting pattern of irritable colons. The same dose given to patients with post-dysenteric irritable colon results in marked hyperactivity of the sigmoid colon.<sup>4</sup> This evidence suggests that patients with irritable colon have a high level of parasympathetic activity, or hyper-reactivity to parasympathetic stimulation.

In another study, Chaudhury and Truelove<sup>5</sup> investigated the effects of emotion on colonic motility in a group of 86 subjects composed of some normal subjects, some with ulcerative colitis and some with irritable colon syndrome. One interview was conducted with emphasis on events in past life known to have produced stress. Some irritable colon subjects showed definite colonic hyperactivity in response to certain topics. However, the same responses also occurred in some patients with ulcerative colitis in some normals. No statistical significance could be found for a particular motility pattern in association with any one of the colon disorders.

Connell's studies<sup>6</sup> showed that contractions and increased tone of the sigmoid do not serve to propel colonic contents but retard mass movement of feces. The constipation of irritable colon syndrome has been related to sigmoid hyperactivity. Conversely, diarrhea patients have sigmoid hypoactivity. However, at about 40 years of age there appears to be a difference in sigmoid motility in con-



stipated patients: The younger individuals have normal to hyperactive motility patterns, the older ones, hypoactive patterns. This difference may represent the natural progression from initial phases of spasm and hypermotility to a phase of atony and hypomotility. Many of the older patients with hypoactive motility records gave a long history of laxative use. The possibility remains that abuse of these agents may play a contributing role.

It has not been possible to define the gastrocolic reflex in terms of nervous pathways. It persists in the post-vagotomy state and after thoracic or lumbar transection of the spinal cord. This reflex may have humoral mediation: Subjects given physiologic doses of pentagastrin respond with an increase in rectosigmoid motility suggesting that the antral hormone gastrin may play some part in mediation of gastrocolic responses.<sup>7</sup> The relation of gastrin to the motor disturbances in some irritable colon patients remains to be determined.

#### CLASSIFICATION

Two clinical forms of irritable colon have been recognized. A spastic type is characterized by abdominal pain with constipation or diarrhea, or an alternating constipation and

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diarrhea. A painless type is characterized by so-called "nervous" diarrhea, with persistently loose stools, often in the morning before work, without pain or other significant symptoms.

Pain may be variable in both distribution and character. The site of pain can be extremely variable and in the majority of patients is localized over the descending colon or hypogastrium. There is no characteristic pain pattern recognized and one can obtain a history of either intermittent bouts of colic or continuous pain. Some patients describe a continuous dull ache, or attacks of colic superimposed on more continuous discomfort. Descriptions of sharp, stabbing, piercing or knife-like pain are less usual. Bowel habits can fluctuate between diarrhea and constipation; and symptoms may be aggravated by eating or influenced by defecation. The frequent occurrence of distension, flatulence, heart burn or nausea leads one to consider heart disease, esophagitis, hiatal hernia, peptic ulcer or gall bladder disease.

Other signs and symptoms of the irritable bowel syndrome are less frequently recognized: 1.) Stools may be pencil shaped or scybalous, and contain varying amounts of mucous; 2.) There is a high incidence of previous abdominal operations;<sup>2</sup> 3.) Patients may relate a long history of suffering from symptoms, no disease being diagnosed; 4.) The syndrome may be part of a reaction to stress and other symptoms of emotional disease are frequently present but overlooked by physicians (such as aerophagia, tension headache, hyperventilation, signs of depression in the form of insomnia, anorexia, lack of energy, sighing respirations or depressed facies). Anxiety may be suspected if the patient is nervous, jittery and diaphoretic with moist palms and chewed nails.

#### PHYSICAL FINDINGS INCLUDING SIGMOIDOSCOPY

As mentioned, the watchful physician may notice features of depression or anxiety while obtaining the initial history. Otherwise physical findings are sparse. At times a tender descending or sigmoid colon may be palpated. Often scars can be seen from previous abdominal surgery but there should be



no evidence of weight loss, fever or anemia. The large majority of patients with irritable colon syndrome appear in good physical health.

Sigmoidoscopy finds its major usefulness in helping exclude organic disease and one finds a normal mucosa or at most excess mucus, hyperemia or spasm. Air insufflation sometimes reproduces the patients' symptoms. The finding which most confidently separates severe irritable colon from a mild case of ulcerative colitis is the fragility of the mucosa; irritable colon syndrome allows vigorous rubbing by a gauze swab without showing signs of damage, while mucosal friability is a hallmark of even the mildest form of ulcerative colitis.

#### RADIOGRAPHY

X-ray studies also help to exclude organic disease. No good correlation can be noted between x-ray findings and the clinical picture of irritable colon; x-rays are often normal in patients with severe symptoms. Occasionally, markedly spastic and hyperactive colons are seen by x-ray in asymptomatic individuals. The barium enema may reproduce symptoms in a patient with irritable colon, or repeated spasms with a small lumen may be noted temporarily obstructing the flow of barium. Lumsden, *et al.*<sup>16</sup> advocate the use of intravenous "Probanthine" if the study suggests the possibility of colonic strictures. It relieves the spasm of irritable colon allowing the entire colon to be filled with barium.

#### PATHOLOGY

As a part of a study of colonic motility in patients with irritable colon or ulcerative colitis, Chaudhury and Truelove<sup>3</sup> obtained colonic mucosal biopsies. In irritable colon patients, normal mucosa was always seen on histologic examination, while in contrast there was obvious inflammation present in the ulcerative colitis group even if symptoms were mild.

It would be unrealistic to subject all irritable colon patients to an extensive work-up, particularly the young female. A careful initial history and physical examination are extremely important. Weight loss, eye signs, skin rash or arthritis point to significant pathology and require investigation. Basic laboratory studies are obligatory and help exclude organic disease. Each patient should have a hemoglobin, white blood count and differential, sedimentation rate, stool for blood, ova and parasites and rectal examination. In addition, all patients with bowel symptoms should undergo sigmoidoscopy. These tests are adequate for a younger population group; older patients require a barium study of the intestinal tract with continued follow-up.

Any diagnosis of exclusion is open to pitfalls so an adequate differential diagnosis must be kept in mind. The definitive elimination of serious conditions is often difficult. Irritable colon can imitate other intra-abdominal disease and the converse is also true. Carcinoma of the alimentary tract may present with symptoms indistinguishable from irritable colon. Small areas of regional ileitis are difficult to detect, and may signal their presence only by the occurrence of symptoms reminiscent of irritable colon. Lesions about the pylorus frequently present with abdominal pain and disorders of bowel habit masking upper gastrointestinal involvement. Thus it becomes necessary to exclude a large number of specific, often obscure diseases. Furthermore, the diagnosis of irritable colon is difficult by virtue of the high incidence of coincidental disease of the gastrointestinal tract such as peptic ulcer, hiatal hernia, gall bladder disease or symptomatic diverticulosis. Much of what has been called biliary dyskinesia may be irritable colon syndrome.<sup>13</sup>

Complaints of recurrent abdominal cramping, distention and diarrhea are very common in the irritable colon syndrome. Weser, *et al.*<sup>18</sup> studied 27 patients with these symptoms who had previously been diagnosed as functional bowel disease. Physical examination and diagnostic studies were normal, but 14 patients had flat lactose tolerance curves.



Jejunal biopsy with enzyme analysis confirmed low levels of lactase. These findings suggest that a significant proportion of patients with chronic gastrointestinal complaints may have intestinal lactase deficiency. Newer techniques may uncover other enzyme defects or organic pathology in patients presently considered to have irritable colon syndrome.

Carcinoid syndrome may present with nausea, vomiting, diarrhea and abdominal cramps. Warner<sup>17</sup> found elevated blood levels of serotonin and increased urinary excretion of 5-Hydroxyindole-Acetic Acid in nine of 65 patients with functional bowel disease. "Unequivocal" improvement was reported with use of the antiserotonin agent cyproheptadine in four of nine patients able to tolerate the drug.

#### TREATMENT

Therapy must be directed at both the physical and psychological aspects of the irritable colon syndrome. In the past, special diets and certain dietary restrictions were enthusiastically advocated but there is little evidence that any food can significantly harm or benefit the colon. Certainly, some compulsive patients may fare better if instructed to adhere compulsively to a prescribed dietary regimen. In general, patients would be best advised to eat well-balanced diets, avoid laxatives and enemas, defecate when the urge is first present, and not be concerned about a specious (but well-advertised) regularity. For either diarrhea or constipation in irritable colon, psyllium seed muciloid can be of marked benefit. It is rare that irritable colon requires any more extensive pharmacotherapy and certain agents may do harm. A patient who is refractory to minimal intervention most likely has unresolved psychological components or a more specific organic disorder which requires further evaluation.

From the psychological standpoint, a superficial study of the patients' background may uncover significant precipitating stress. Often its resolution can result in a dramatic improvement in symptoms. When obvious anxiety is present, reassurance and support, coupled with thorough evaluation accom-

panied by logical explanation, will suffice to benefit the patient. Minor tranquilizers and antidepressants may be temporarily helpful in those with more severe anxiety or depression. Anticholinergic side effects of antidepressants may obviate their use in patients with constipation. Rarely there are indications of deep intrapsychic conflict, or major neurotic disorder, or the symptoms are a necessary part of psychic adjustment. It would then be advisable to attempt only a superficial psychotherapeutic approach, and consider the aid of a competent psychiatrist, but such consultation is seldom necessary.

#### PROGNOSIS

The painless diarrhea form of irritable colon has the better prognosis, but is subject to recurrences.<sup>2</sup> About half of these patients can be made completely symptom free, while approximately one-third of the "spastic colon" group achieves complete alleviation of distress. When symptoms exacerbate, it is wise to check for precipitating stress. The duration of symptoms before diagnosis and institution of therapy does not appear to have a major effect on prognosis.

#### CONCLUSION

Several questions remain: Will other metabolic or neuromuscular organic disease be further separated from the irritable colon syndrome? For those in whom the affliction is purely "psychogenic," what governs the organ system chosen as the manifest end organ? Does the nature of psychological conflict relate to what symptoms are present? Can persistent psychic conflict over a long period of time, manifesting as irritable colon, result in tissue damage in the colon? Some of these questions may be answered in the future; for the present it appears that this disorder is essentially benign and represents a functional maladaptation, best managed by few if any drugs and full supportive care from a sentient physician. □

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# Pulmonary Embolism

PAUL D. STEIN, M.D.

**“RECOGNITION** of Pulmonary Embolism,” by Doctor James K. Alexander, which appears in this issue is certainly an instructive article, touching upon many previously debated points about acute pulmonary embolism which are now gradually becoming clarified. As Doctor Alexander states, pulmonary embolism is most conclusively diagnosed by pulmonary arteriography.<sup>1</sup> The pulmonary arteriogram shows signs of morphologic as well as physiologic significance. The morphological signs (filling defects and cut off vessels) are of diagnostic significance even in the presence of associated disease such as congestive heart failure or pulmonary emphysema. The physiological signs (capillary hypoperfusion, and asymmetrical filling or emptying of pulmonary arterial branches) are of some diagnostic significance even in the presence of associated cardiac or pulmonary disorders, but are nonspecific in the sense that emphysema, congestive heart failure, pneumonia, or other diseases that affect the pulmonary vasculature may also show these findings. Pulmonary scintiscans are analogous to the capillary perfusion phase of pulmonary arteriograms. Therefore, they are nonspecific, and reliable only in the ab-

sence of other diseases affecting the pulmonary vasculature. Unfortunately, the majority of patients who suffer from acute pulmonary embolism have such associated diseases. For this reason, pulmonary arteriography is highly desirable to establish a firm diagnosis. Peripheral venous injection of the radio-opaque contrast material is only rarely helpful because of the dilution of dye. To obtain pulmonary arteriograms satisfactory for visualization of necessary details, it is almost always necessary to position the tip of the catheter into the main portion of the pulmonary artery for the injection of contrast material.

Since pulmonary emboli tend to undergo lysis spontaneously, it is highly desirable to obtain pulmonary arteriograms as soon as possible after the suspected incident in order to make the diagnosis. If the procedure is delayed, the angiographic signs may become nonspecific or equivocal.<sup>2</sup>

In evaluating the signs and symptoms of acute pulmonary embolism, it is important to differentiate pulmonary embolism associated with destruction of pulmonary tissue (pulmonary infarction) from pulmonary embolization not associated with infarction. Even massive pulmonary embolization can occur without pulmonary infarction. In such

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individuals pleuritic pain, friction rub, and hemoptysis are absent. Most patients with acute pulmonary embolism do not have pulmonary infarction.

Some of the electrocardiographic abnormalities in pulmonary embolism, particularly ST and T changes, may be due to myocardial ischemia. In laboratory animals during experimentally induced acute pulmonary embolism, coronary blood flow has been shown to increase, presumably secondary to myocardial hypoxia. Changes of the ST segment and T wave may occur at this time. Following the administration of oxygen, the hypoxia is reversed, coronary flow decreases, and the electrocardiographic changes are sometimes reversed.<sup>3, 4</sup>

Since the pulmonary emboli will lyse spontaneously, with return of the pulmonary hemodynamics toward normal,<sup>2</sup> treatment has been directed primarily at the prevention of further embolic occurrences. Hopefully lytic agents such as urokinase and streptokinase will be helpful in accelerating the throm-

bus dissolution. A nationwide cooperative study sponsored by the National Heart and Lung Institute is underway at the present time to evaluate the effectiveness of these agents. Pulmonary embolectomy is rarely necessary and even more rarely effective. Since the vast majority of pulmonary emboli arise from thrombosis of the leg veins,<sup>5</sup> inferior vena cava ligation may be a helpful form of therapy for the prevention of further emboli. It is especially helpful in patients in whom embolism is either a continuing danger or in whom a single recurrent embolus could be fatal. □

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# Recognition of Pulmonary Embolism

JAMES K. ALEXANDER, M.D.

*Because of protean manifestations, the diagnosis of pulmonary embolism is frequently difficult. Pulmonary angiography provides the most specific diagnostic information, currently, and may be indispensable for appropriate therapy.*

THE DIAGNOSIS of acute pulmonary thromboembolism may be derived from history, symptoms, physical findings, electrocardiogram, serum enzymes, chest roentgenogram, pulmonary function tests, isotope lung scan, and pulmonary angiography. Of these, angiography is by far the most accurate and specific in detecting the presence and extent of embolic disease. Indeed, angiography may be absolutely necessary to establish the diagnosis in the presence of congestive heart failure, or to differentiate such conditions as atelectasis, pneumonia, acute myocardial infarction, and peritonitis.

The symptoms of acute pulmonary embolism are notoriously protean, so that the disease may mimic a variety of neurological, cardiovascular, respiratory, and upper abdominal disorders. Dyspnea, restlessness,

and apprehension are common, as are symptoms due to cerebral ischemia such as dizziness, syncope, and convulsive phenomena. Dull substernal pain signals massive embolism, and is probably secondary to coronary insufficiency. If pulmonary infarction ensues, pleuritic pain, cough, and hemoptysis may develop. Wheezing occurs infrequently with acute pulmonary embolism, though atelectasis and hypocapnia in the affected regions of the lung favor airway narrowing.

Of the findings on examination, hyperpnea is the most consistent, and often the most striking. Though increased physiological dead space is a factor, the mechanism of hyperpnea in man is unknown. Oxygen administration usually produces little effect. Fever, tachycardia, and tachypnea are frequent findings. Signs of venous thrombosis in the legs develop in less than half the patients, and may not appear until days or weeks after onset of cardiorespiratory or neurological symptoms. Jaundice is more often due to hepatic dysfunction than to hemolytic mechanisms, occurring most frequently in association with congestive heart failure or chronic liver disease.

While certain symptoms and signs in an appropriate clinical setting may strongly suggest the diagnosis of pulmonary embolism, these same findings may obtain in other diseases. To establish the presence of acute pulmonary embolism, or to rule it out, additional diagnostic aids are almost always necessary. The conditions presenting differential diagnostic problems most frequent-



ly are pneumonia, atelectasis, pericarditis, cholecystitis, dissecting aortic aneurysm, cardiac tamponade, acute myocardial infarction, and hyperventilation syndrome.

Appraisal of aids in diagnosis may begin with electrocardiography. In most cases, acute pulmonary embolism results in no definite electrocardiographic abnormality, and the transient nature of the changes, when they do occur, is characteristic. The electrocardiographic findings most commonly observed, namely sinus or supraventricular tachycardia, right axis deviation, right bundle branch block, and inverted T waves in leads V<sub>1</sub> to V<sub>3</sub> or V<sub>4</sub> may be helpful, but are all non-specific.

Elevated serum lactic dehydrogenase (LDH) along with normal serum glutamic oxalacetic transaminase (SGOT) and normal or elevated serum bilirubin favor the diagnosis of pulmonary embolism. However, LDH levels may not rise following embolism, and elevation is a non-specific finding, occurring also with cardiac failure, shock, pregnancy, liver disease, and after surgical procedures. In addition, LDH assay does not differentiate pulmonary infarction from pneumonia.

Chest roentgenographic findings may be suggestive of embolism, but are not often diagnostic. Before frank infarction develops, the chest film may show no abnormality. In some cases, enlargement of main pulmonary arteries or their major branches is discernible, with absent or diminished pulmonary vascular markings peripherally. The hemidiaphragm on the affected side may be elevated, due to atelectatic changes. Pulmonary densities appearing after infarction are typically subpleural, may be transient, are often

associated with effusion, and most frequently involve the right lower lobe.

Scintillation scanning of the lungs, after intravenous injection of macro-aggregated human serum albumin particles labeled with I<sup>131</sup> or other appropriate radioactive material, is a useful technique in the diagnosis of acute pulmonary embolic disease. Since most of these particles have a larger cross-sectional area than the average pulmonary capillary, they are trapped at precapillary level during the initial transit through the lungs, and the distribution of radioactivity reflects regional pulmonary blood flow. Thus, segments to which the blood supply has been interrupted by occlusive thromboemboli will appear as "cold areas" or areas of diminished radioactivity on the lung scan. This method is advantageous because it is virtually without risk, and lends itself well to the performance of serial observations. However, any condition leading to reduced or absent regional capillary perfusion may produce alterations in the lung scan so that reduced radioactivity over the site of a pulmonary infiltrative lesion on the chest film can be anticipated regularly, and provides no differential diagnostic information. The diagnostic potential of the scanning procedure is greatest when embolism is suspected, but there is little or no abnormality found on the chest film. Even under these conditions, "cold areas" may be found, particularly over lung bullae, in obstructive lung disease, or over the lower lobes with left ventricular failure. Conversely, in some cases little abnormality in the scan may be seen where thromboemboli produce partial but not completely occlusive lesions. Though cautious interpretation is required, the lung scan remains a very useful screening procedure in the diagnosis of acute pulmonary embolism, and once the diagnosis is established, may provide information regarding the course of the disease and response to therapy.

Visualization of the pulmonary vasculature can be accomplished by either selective or venous angiography. In patients with acute pulmonary thromboembolism, the chief angiographic findings are complete or incomplete obstructions of various pulmonary arterial branches, intra-arterial filling de-

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fects, decrease in volume of affected lung segments, and changes in arterial caliber proximal or distal to the obstructive lesions. In other cardiorespiratory diseases such as cardiac failure, pneumonia, pulmonary tumor, abscess, bulla, fibrosis or emphysema, the pulmonary arteries may be compressed, displaced, or attenuated, but remain patent to the subsegmental level, showing neither filling defects nor obstructive lesions. Thus it is the identification of specific structural changes within the pulmonary arteries that

renders angiography the most definitive diagnostic method available. The decision to perform arteriography ultimately must be a matter of clinical judgment, based on the status of the patient, facilities available, and possible therapeutic implications. Angiographic demonstration of pulmonary thromboembolism would appear essential before pulmonary embolectomy, and highly desirable before interruption of blood flow through the inferior vena cava. □

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# Medicine in the American Revolution

## PART II

VIRGINIA ALLEN

*Fatal experience has taught the people of America the truth of a proposition long since established in Europe, that a greater proportion of men perish with sickness in all armies than fall by the sword.<sup>1</sup>*

THE FIRST HOSPITAL facilities for the Continental Army were several large homes at Cambridge, Massachusetts and were administered by Doctor John Warren.<sup>1</sup> Other hospitals were soon opened, including one for smallpox patients. A variety of buildings were used—churches, colleges, private houses, etc. In addition, a few large hospitals were constructed. One of these was built at Yellow Springs, approximately ten miles from Valley Forge, and called Washington Hall.<sup>2</sup> It was one hundred and six feet long, thirty-six feet wide, surrounded by nine foot porches, and three stories high. The Governor's Palace at Williamsburg, Virginia was appropriated for use as a hospital until it burned, December 25, 1781.<sup>3</sup> Regimental surgeons were directed to send to a general hospital the sick of their units who needed constant care. Each regiment main-

tained two or three tents for those patients who could not, or did not need to be sent.

Civilian hospitals of the late eighteenth century left much to be desired, but the military hospitals were even more intolerable. General Anthony Wayne called the hospital at Ticonderoga, December, 1776, a "house of carnage where the living mingle with the dead."<sup>4</sup> Hospitals were overcrowded centers of disease and often lacked medicine and sometimes even food. Many soldiers entered hospitals with minor illnesses and contracted serious, often fatal diseases while there. Visits of convalescent soldiers to contagious patients frequently spread infectious diseases. Uncertainty about the causes of diseases and their contagion hampered the development of preventive measures. Consequently, overcrowding and poor ventilation were major causes of disease and high mortality in military hospitals.

Doctor John Jones, the author of the nation's first medical textbook, suggested that ventilation was needed and that houses should be avoided for use as hospitals; churches, barns, and other buildings open to the rafters should be used instead. Doctor James Tilton, director of the general hospital at Trenton, New Jersey, put some of Doctor Jones' theories into practice. He had built log huts which accommodated five or six men. Later, in the winter of 1779-1780, he designed an H-shaped, three ward, log hos-



pital which had no connecting doors. Windows were provided for ventilation and space maintained between patients. As a result, recovery chances were greatly improved.<sup>5</sup>

Hospital reports listed numerous kinds of fevers—typhus, putrid, jail, intermittent, slow, bilious, hectic, and remitting, are only a few. Other diseases included: diarrhea, dysentery, rheumatism, venereal, jaundice, rash, itch, measles, mumps, scurvy, piles, lumbago, asthma, paralysis, consumption, cholera, smallpox, whooping cough, rupture, sore eyes, abscess, malaria, and hip gout.<sup>6</sup> Typhus fever was the greatest scourge and the combination of overcrowding, inadequate ventilation, and lack of sanitary precautions made it fatal. The physicians and surgeons, constantly exposed to a variety of contagious diseases, had a higher death rate than did the commanding officers.<sup>7</sup>

Doctor Lewis Beebe kept a brief journal while serving with the Northern Army. The following account was entered on Tuesday, October 1, 1776: "In the afternoon it made my heart ache to visit the hospital, to see the dysentery rage with unabated fury among many of them when I had no one article calculated for their assistance; one with this disorder, and two with the scurvey, were on the brink of the grave."<sup>8</sup>

Another entry described hospital conditions: "Here in the hospital is to be seen at the same time some dead, some dying, others at the point of death, some whistling, some singing and many cursing and swearing . . . poor distressed soldiers, when they are taken sick, are thrown into this dirty, stinking place and left to take care of themselves. No attendance, no provision made, but what must be loathed and abhorred by all, both well and sick . . . What will become of our distressed army? Death reigns triumphant."<sup>9</sup>

Wounds were principally caused by musket balls and only a few were the result of

artillery fire. The bayonet was not used, but many wounds were recorded from clubs, knives, and hatchets. An organized system of collecting the wounded and transporting them to the hospitals was lacking. Open wagons were often used and their arrivals carrying the groaning, miserable soldiers frequently set off protests from the local residents. Army hospitals met the same type of opposition that air bases met a hundred and eighty years later. Contagious hospital diseases invariably spread among the local citizens.

Surgery consisted mainly of amputating limbs and trepanning fractured skulls. Many regiments did not have a set of surgical instruments and too often soldiers died of gangrene while waiting the amputation of a limb. Surgical instruments were very scarce because importations were cut off and domestic instrument makers were busy manufacturing weapons. American surgeons had the opportunity to observe and learn the techniques of European doctors. Doctor Thacher in his *Military Journal* commented that the English surgeons performed with skill and dexterity, but that the Germans generally were uncouth, clumsy, and without sympathy.<sup>10</sup> His entry for October 24, 1777, described surgery at the Battle of Saratoga: "About thirty surgeons and mates worked from 8 A.M. until late each evening . . . amputating limbs, trepanning fractured skulls, dressing formidable wounds. If I turn from beholding mutilated bodies, mangled limbs and bleeding, incurable wounds, a spectacle no less revolting is presented of miserable objects, languishing under afflicting diseases of every description."<sup>11</sup>

Insufficient medicine and supplies constantly plagued the medical department. In October, 1776, General Nathanael Greene wrote Congress that the sick were in a wretched situation and that the surgeons were without basic articles of medicine, the hospital was too small to accommodate more than half the sick, and hundreds perished daily from lack of assistance.<sup>12</sup> General Philip Schuyler begged for help from Congress. He wrote on August 6, 1775: "Out of about five hundred men that are here, near a hundred are sick, and I have not any kind of hospital stores, although I had not forgot to

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order them, immediately after my appointment. The little wine I had for my table I have delivered to the regimental surgeons. That being expended, I can no longer bear the distress of the sick, and impelled by the feelings of humanity, I shall take the liberty immediately to order a physician from Albany (if one can be got there, as I believe there may) to join me, with such stores as are indispensably necessary. If Congress should approve this measure, they will please signify what allowance of pay will be made. If not, I shall discharge the person, whoever he be, paying him for the services that he may have performed.”<sup>13</sup>

Although Congress established the hospital plan in July, 1776, not until September 14, did it appoint a committee “to devise ways and means for supplying the Continental Army with medicines.”<sup>14</sup> Congress asked the committee to obtain proper medicine chests for the battalions. It intended all chests to be essentially the same but the amount of medicines needed exceeded the stock of even the largest druggists. The first few chests were complete, but supplies soon began to run low, consequently, the majority of the regiments traveling north were lacking in some basic medicines. The surgeons mistakenly assumed they could obtain the missing drugs when they arrived at the general hospital.

The drug supplies for the hospital department had come first from the stocks of private druggists; however, this source was inadequate for the war. Many druggists were Loyalists, many were indifferent, and many were caught between a rising inflation and a Congress which could offer no money—only a promise for the future. The internal disorganization, the problems of communication and transportation, and the usual losses by an army, would have caused shortages even if there had been an adequate supply. English supplies were no longer available and the French did not directly export any quantity of medical supplies until 1778. American privateers provided some relief with drug cargoes from British prize ships which were an important source of supply, especially in 1778 and 1779.<sup>15</sup> Shortages also included surgical instruments, mortar and pestles, and glass vials for compounded medicines.

Many supplies intended for Continental troops were lost through confiscation by state militias and by the Navy.

The most wanted drugs were used to accomplish one of three very common medical practices of the time—vomiting, purging, and blistering. Cathartics and purgatives were prominent drugs on the list of major items needed. Gum opium was used for its narcotic effect, while gum camphor, potassium nitrate, and mercury were used for a variety of purposes. Prescriptions were compounded haphazardly with little thought of accurate measure. Such phrases as “enough to lie on a penknife’s point” and “the bighth of a walnut” were commonly used in prescriptions.<sup>16</sup>

Lint made by scraping or picking apart old woven material was used for absorption and was often in short supply. Local manufacture eventually eased or sometimes solved some shortages. Lint, glass vials, purging salts and nitre salts were manufactured locally and began the first large-scale drug manufacturing in America.<sup>17</sup> Indigenous substitutes were found for many botanical items which previously had been imported.

The most important single disease suffered by the Continental Army was smallpox. Its impact was so great that James Flexner in *Doctors on Horseback* concluded that were it not for smallpox and the inadequacies of the medical department Canada would probably now be a part of the United States.<sup>18</sup> It influenced the results of several important campaigns, decreased enlistments, and caused havoc in the Continental Army. General Washington wrote: “I am induced to believe that the apprehension of smallpox and its calamitous consequences have greatly retarded enlistments . . . I know it is more destructive to an army in the natural way than the swords.”<sup>19</sup>

The colonists were well-acquainted with smallpox and its devastating effects. It was an ever present danger to those who had not already survived the disease or submitted to inoculation. More than a decade would pass before Edward Jenner’s discovery of vaccination put an end to its threat. Great controversy and high emotions raged concerning the practice of variolation or inoculation.<sup>20</sup> Those who advocated and encour



aged it frequently encountered physical violence.<sup>21</sup> Benjamin Franklin, Doctor Benjamin Rush, and many New England clergy had the courage to support it and through their influential encouragement inoculation was gradually popularized and greatly decreased the spread of the disease.

There was ample proof of the desirability of smallpox by inoculation over contracting it in the natural way. In the Boston epidemic of 1752, for example, there was a fatality rate of 9.1 percent of those contracting it in the natural way and only 1.5 percent of those undergoing inoculation.<sup>22</sup> Its obvious success, however, did not silence the outcries against it. Part of the criticism originated from the fact, that frequently proper safeguards were not practiced after inoculation and too often the inoculated did not assume proper precautions to protect others.

Early in 1775, smallpox appeared in the New England army. On June 27, 1777, the Massachusetts Provincial Congress directed that a hospital be established for care of its victims. There were civilian epidemics in Boston in 1776 and 1778. The British army also suffered from this affliction. It was widely rumored at the time of their evacuation of Boston, that the English planned to spread smallpox to the Continental Army—an early attempt at germ warfare.<sup>23</sup>

The long-standing colonial difference of opinion concerning inoculation delayed official action. In some colonies inoculation was frequently practiced, while in others it was prohibited by law. Adding to the controversy, was the fact that soldiers fearing the dreaded disease inoculated themselves and ignored all precautions for the safety of themselves or others. Some officers objected to the practice because they did not feel they could afford to intentionally incapacitate any of their men for even a few days. The commander of a division of the Northern Army, General John Thomas, refused to have his troops inoculated because they were so few in number that he wanted none of them on the sick-list. Consequently, when smallpox appeared, the camp became a veritable pest-hole. On June 2, 1776, General Thomas be-

came a victim of his own prohibition and died of smallpox.

Smallpox continued to spread, and in the Eastern and Northern armies materially reduced the number of troops available for combat. Fear of it discouraged recruiting and resulted in desertions. General Horatio Gates reported to General Washington from Ticonderoga, August 7, 1776: "The very great desertion from this Army has, I believe, been principally occasioned by the dread of the Smallpox."<sup>24</sup> Governor Jonathan Trumbull, New York, believed, "The Smallpox in our Northern Army carries with it greater dread than our Enemies."<sup>25</sup>

During this time, the director of medical affairs for the Northern Army was Doctor Samuel Stringer. Under his administration, or lack of it, the department deteriorated into a state of confusion. It was an example of the worst medical care in the Continental Army. There was lack of discipline and ignorance of ordinary medical matters displayed by surgeons, plus a terrible scarcity of medical supplies. While the men suffered, Doctor Stringer tried to maintain his autonomy and independence of Doctor Morgan and the rest of the medical department. Morgan attempted to ignore Doctor Stringer's animosity and sent him a number of competent assistants and supplies from his own small supply. During this critical time Stringer left the Northern Army, ostensibly going in search of supplies and surgeons; however, he was absent an unnecessarily long time leaving the department without leadership. In the meantime, the soldiers continued to suffer greatly.

Doctor Beebe in his journal reported vividly the suffering around him: "Nothing to be heard from morning to night but 'Doctor! Doctor! Doctor! from every side'."<sup>26</sup> On May 17, 1776, he continued: "Language cannot describe nor imagination paint the scenes of misery and distress the soldiery endure. Scarcely a tent upon this isle [Isle aux Naux] but what contains one or more in distress and continually groaning and calling for relief, but in vain! . . . The most shocking of all spectacles was to see a large barn crowded full of men with this disorder [smallpox] many of which could not see, speak or walk. One—nay—two had large



maggots, an inch long, crawl out of their ears, were on almost every part of the body. May 26—Death has now become a daily visitant in the camps, but as little regarded as the singing of the birds.<sup>27</sup> July 3—Death visits us every hour.”<sup>28</sup>

General Richard Montgomery, September, 1775, began a march toward Montreal with two thousand men. By November, his force was reduced by expiring enlistments, desertion, and sickness to barely 500 men.<sup>29</sup> Of nineteen hundred men confronting Quebec only nine hundred were fit for duty. British reinforcements arrived and the army abandoned camp in panic with one hundred fifty smallpox patients, who had left their beds to join the flight, spreading their affliction in the process. A member of the Congressional committee investigating the defeat in Canada wrote: “Our misfortunes in Canada are enough to melt the heart of stone. The Smallpox is ten times more terrible than the British, Canadians, and Indians together. This was the cause of our precipitate retreat from Quebec.”<sup>30</sup>

The Northern Army, which had triumphantly begun its march into Canada, became destitute—exhausted by fatigue and reduced by sickness. General Gates writing in 1776 said: “As fine an Army as ever marched into Canada has this year been entirely ruined by the Smallpox.”<sup>31</sup> A letter by Charles Cushing described the retreat: “The line of retreat extended near thirty miles distance and a great part of them sick with the Smallpox . . . I am creditably informed no less than thirty Captains died of it and not more than one in three that took it in the natural way lived.”<sup>32</sup>

In three months the American Army had lost five thousand men through disease and desertion, and of those remaining two thousand were sick. Doctor John Morgan’s official report for June 26, 1776, showed that eighteen hundred men were incapacitated by smallpox and the total number of sick and unfit in the Northern Army was thirty-three hundred.<sup>33</sup>

Morgan made repeated appeals to Congress for settlement of the disputes which prevented his bringing order to the medical service of the Northern Army. In November, 1775, Congress appointed an investigat-

ing committee. Its report in January, 1777, resulted in the dismissal of Doctor Stringer. Doctor Jonathan Potts was his successor. By a system of group inoculation, he controlled the threat of smallpox, but unfortunately, the damage done to the Northern Army was beyond repair.

Responsibility for most of the mismanagement of the hospitals and supplies belongs to the Continental Congress, who ignored repeated pleas from the hospital department. Congress, however, was unfamiliar with the requirements and importance of a medical service. In addition, it was struggling with the almost overwhelming problem of conducting a war for a poorly organized, almost bankrupt group of colonies. □

#### FOOTNOTES

1. John Warren was the brother of Doctor Joseph Warren who was killed at Bunker Hill.
2. James E. Gibson: *Doctor Bodo Otto and the Medical Background of the American Revolution* (Springfield, Illinois: Charles C. Thomas, 1937), p. 152.
3. Wyndham B. Blanton: *Medicine in Virginia in the Eighteenth Century* (Richmond: Garrett & Massie Inc., 1931), p. 277. There was one casualty in the fire, but all the patients were saved.
4. James A. Huston: *The Sinews of War: Army Logistics 1775 to 1783* (Washington: United States Government Printing Office, 1966), p. 40.
5. *Ibid.*, p. 41.
6. Gibson, p. 84.
7. *Ibid.*
8. Henry Steele Commager and Richard B. Morris, eds.: *The Spirit of 'Seventy-Six*, Vol. II (New York: The Bobbs-Merrill Co., Inc., 1958), p. 823. Doctor Beebee was a Massachusetts jack-of-all-trades. For a time he was a doctor, later a minister, and last, kept a liquor store in New York City.
9. *Ibid.*, p. 821.
10. James Thacher: *A Military Journal During the American Revolutionary War* (Boston: Richardson and Lord, 1823), p. 134.
11. *Ibid.*, p. 135.
12. Blanton, p. 265.
13. Francis R. Packard: *History of Medicine in the United States*, Vol. I (New York: Hafner Publishing Co., 1963), p. 549.
14. United States National Museum: *Drug Supplies in the American Revolution* (Washington: United States Government Printing Office, 1961), p. 112.
15. United States National Museum, p. 129.
16. John Duffy: *Epidemics in Colonial America* (Baton Rouge: Louisiana State University Press, 1953), p. 8.
17. United States National Museum, p. 130.
18. James Flexner: *Doctors on Horseback* (New York: The Viking Press, 1944), p. 4.
19. Gibson, p. 85.
20. Cotton Mather was an early colonial advocate of variolation. There were established procedures for variolation and individuals who specialized in performing the service. Virus from smallpox patients were used, but usually only a minor illness of short duration resulted.
21. William H. Woglom: *Discoverers for Medicine* (New Haven: Yale University Press, 1949), p. 71.
22. Duffy, p. 24.
23. Gibson, p. 89.
24. *Ibid.*, p. 100.
25. *Ibid.*, p. 99.
26. Commager and Morris, p. 820.
27. *Ibid.*, p. 821.
28. *Ibid.*, p. 822.
29. John Richard Alden: *The American Revolution* (New York: Harper & Row, 1954), p. 55.
30. Gibson, p. 98.
31. *Ibid.*, p. 96. Charles Cushing was a young soldier from Massachusetts.
32. *Ibid.*, p. 98.
33. *Ibid.*, p. 102.

6520 North Missouri, Oklahoma City, Oklahoma 73111



# OU Medical Graduates: What They Do

MARK ALLEN EVERETT, M.D.

*Medical specialties of all OU Medical School graduates of 1958-1965 are reported. Approximately 50 percent of graduates practice internal medicine, general surgery or general practice. The geographic location of general practitioners is shown.*

A RECENT STUDY of the 712 University of Oklahoma Medical School Graduates during the years 1958-1965, revealed the types of practice for 680 physicians. These data are presented in Table I. Additional information regarding physicians in general practice is presented in Table II.

As may be seen from Table I, approximately one-half of the graduates practice general surgery, internal medicine or general practice. The selection of specialty is not related to academic performance in medical school except for internal medicine which attracts a significantly higher proportion of students from the upper one-third of the class, and for general practice and

TABLE I  
Specialty of Medical Graduates (1958-1965)  
Number of Graduates

Specialty	# Total	Position in Class			Percent of Total
		Upper	Middle	Lower	
General Surgery	121	37	38	46	17.1
Internal Medicine*	110	52	35	23	15.6
General Practice*	107	16	36	55	15.0
Obstetrics-Gynecology	60	21	21	18	8.5
Ophthalmology	43	15	11	17	6.2
Psychiatry	42	12	18	12	6.1
Orthopedics	32	13	10	9	7.5
Radiology	28	13	9	6	3.9
Pediatrics	25	7	10	8	3.6
Pathology	24	12	9	3	3.5
Anesthesiology*	20	0	8	12	2.8
Otorhinolaryngology	17	5	7	5	2.4
Dermatology	14	7	4	3	2.0
Neurosurgery	12	6	2	4	1.7
Urology	11	3	4	4	1.5
PMPH	10	1	7	2	1.4
Neurology	4	2	2	0	0.6
Unclassified or other	27				
retired	3				
died	1				
lost	1				

— \*significant .01 level  
712

anesthesia which have a significantly larger proportion of students from the lower one-third of the class ( $X^2 + \text{Yates}$ ). The proportion of physicians in general practice from each class did not change significantly during the period 1958-1965.

The geographic location of 100 of the 107 general practitioners is presented in Table II. The portion of general practitioners remaining in Oklahoma is 56 percent, and

From the Department of Dermatology, University of Oklahoma Medical Center.



TABLE II	
Geographic Location of General Practitioners (OU Graduates 1958-1965)	
Oklahoma .....	56
Oklahoma City and Tulsa .....	19
Suburbs of Oklahoma City and Tulsa .....	7
Other cities (>25,000 population) .....	5
Towns and Rural .....	25
Out of State and Military .....	44
Total .....	100

differs only slightly from the figure for all physicians.<sup>1</sup> More general practitioners are located in urban areas (31) than in towns or rural areas (25).

The problem of supply and distribution of

*Mark Allen Everett, M.D., graduated from the University of Oklahoma School of Medicine in 1951, where he is presently Professor and Chairman of the Department of Dermatology. Doctor Everett is certified by the American Board of Dermatology and is a member of the American Academy of Dermatology, the Society of Tropical Dermatology, the Society of Investigative Dermatology, the American Venereal Disease Association, the American Dermatological Association and the Radiation Research Society.*

physicians is obviously not solved exclusively by recruiting general practitioners among medical students, since, as with all graduates, approximately 50 percent leave the state permanently, and of those remaining, the majority settle in urban areas. A critical question is why over one-half of our graduates leave the state permanently. If this question can be answered, then a reduction in this outflow of physicians might be undertaken. A process which reduced the high percent of medical graduates leaving would be much more economical than increasing the size of the medical school classes.

### SUMMARY

The medical specialty of OU Medical School graduates of 1958-1965 has been analyzed. All specialties are reported but approximately 50 percent of graduates practice internal medicine, general surgery or general practice. The geographic location of general practitioners is shown. □

### REFERENCE

1. Everett, M. A.: OU Medical Graduates: Where They Go. JOSMA, September 1970.  
800 N.E. 13th Street, Oklahoma City, Oklahoma 73104

# THIRD ANNUAL MYRTLE LAUGHLIN MEMORIAL LECTURESHIP in HEMATOLOGY

William B. Castle, M.D., distinguished physician, Veterans Administration and Francis Weld Peabody Faculty Professor of Medicine, Emeritus, Harvard University, will present the lecture on "Pathophysiology of Vitamin B<sub>12</sub> Assimilation."

4:00 p.m.  
January 14th, 1971

University of Oklahoma  
Medical Center

Oklahoma City



## Physicians' Assistants Training Approved

Two new training programs for physicians' assistants were "endorsed in principle" by the OSMA's Board of Trustees at a meeting held October 18th.

The University of Oklahoma School of Medicine, under the leadership of Thomas N. Lynn, M.D., has launched a degree program and an experimental "independent duty" training program to extend the productivity of physicians through the use of "assistant doctors."

OU's Board of Regents and the Oklahoma Regents for Higher Education have approved the Bachelor of Health degree program which is now underway at the school.

To qualify for the degree program, a student must have completed 60 hours of credit in an accredited college or university. This is followed by 41 hours of academic training in health subjects at the medical school and 36 credit hours in practical training at the school or at some other clinical facility. The clinical training will span 12 to 15 months. Students receiving the Bachelor of Health degree are expected to be employed by physicians under their direct supervision.

The other training program is to provide additional training to ex medical corpsmen who attained the status of "independent duty" operators while in military service. These physician assistants will receive six months training at the medical school and from three to six months additional training under a physician preceptor. Upon graduation, they will practice independently in a have-not community, but will be employed by and under the supervision of their preceptor or another licensed physician. A study will be made by researchers as to their acceptance in the communities being served.

Both types of physicians' assistants will raise certain problems in

the area of legal recognition, professional liability, and relationship to other paramedical personnel. It is anticipated that physicians' assistants will not be licensed; rather, it is expected that they will be registered by the State Board of Medical Examiners.

In other actions, the OSMA Board of Trustees:

- Voted to take a strong position in opposition to the so-called Bennett Amendment which would require medical societies to assume the role of government agents in hospital and nursing home utilization review associated with Federal health care programs.

- Approved guidelines for a cooperative arrangement with the Department of Public Welfare to suspend, revoke (or place on probation) the Medicaid billing privileges of physicians felt to be abusing the program. However, a "wait-see" attitude was adopted in connection with the respect extended by DPW to the OSMA opinion in any such judicial proceedings.

- Approved parts A and B of the AMA Medcredit plan as being the lesser of evils when compared to other national health insurance schemes, but objected to part C which would set up a massive peer review plan for government programs.

- Authorized the association's Committee on Planning to draft resolutions for introduction to the AMA House of Delegates at its Boston meeting.

- Approved co-sponsorship of a Kansas-Oklahoma Oriental Tour which will depart October 29th, 1971, for a week in Tokyo and a week in Hong Kong. The tour—which will provide air fare, housing, two meals a day and other benefits at a cost of \$933 per person—will be promoted beginning early next year. □

## Drug Abuse Seminar Set For Enid

The first of a series of six seminars on the subject of drug abusing patients has been scheduled for Enid on January 14th. The scheduling of the meeting was announced by Charles Smith, Jr., M.D., Chairman of the OSMA Alcoholism and Drug Abuse Committee.

Practical information regarding the care and treatment of the drug abusing patient will be given during each seminar. Prior to the Enid meeting, all doctors in the Northwest quadrant of the state will receive a first aid manual on drug abuse.

The actual program for the seminar and the first aid manual are being compiled by a special subcommittee headed by Frank Adelman, M.D., an Enid psychiatrist. Other members of the subcommittee are Jim Earls, M.D., and Tom Donica, M.D., both in the private practice of psychiatry in Oklahoma City. Al Paredes, M.D., a nationally recognized researcher in alcoholism at the OU Medical Center, rounds out the subcommittee.

The first action of the subcommittee was to seek information from doctors in the Northwest part of the state regarding what information they would like to have about drug abuse. Doctor Adelman stated that the purpose of the questionnaire was to allow the subcommittee to design a seminar program that would answer, if possible, as many practical questions as possible about the care and treatment of the drug abusing patient.

Compiling the first aid manual will also be a primary concern to the subcommittee. Just before the January 14th meeting, copies of the manual will be sent to all physicians in the Northwest part of the state. Other state physicians will be mailed copies shortly thereafter.

Future seminars are being scheduled for Arrowhead Lodge on Lake Eufaula, Tulsa, Quartz Mountain Lodge near Altus, Lake Texoma Lodge, and Oklahoma City. Exact dates and the conference locations will be announced later. □



## Nader Attacks Profession

Consumer advocate Ralph Nader has directed his attention to the nation's health care system in a recently-released report on peer review.

Nader's "Raiders" have concluded that peer review by physicians is a matter of the fox guarding the chicken coop. The report says that no review mechanism for hospital care "worthy of the name" exists—"Even with the best of motivations, it would still be imprudent for a regulatory mechanism to be completely controlled by the persons being regulated." Naturally, Nader favors consumer involvement in peer review.

He also advocates a National Board of Medicine in the style of the Federal Reserve Board which would have sole jurisdiction over all Federal health programs. To participate in these programs States would have to bring their standards and licensure laws into conformity with Federal standards established by the new Board.

Referring to a statement by HEW Undersecretary John Venneman that National Health Insurance would "break—utterly and totally—with the past," Nader's report asks: "Is this necessarily undesirable?"

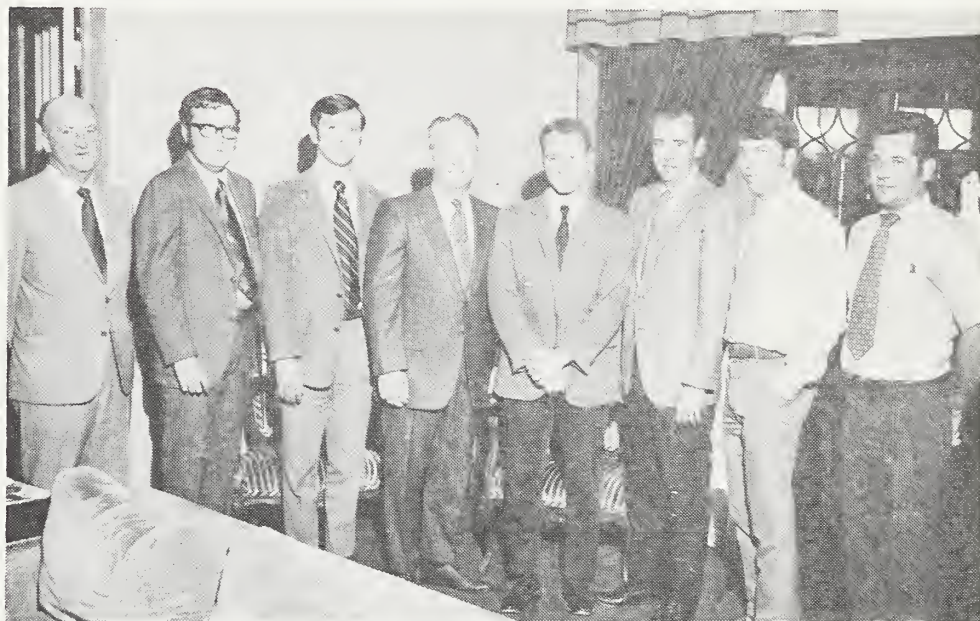
Adverse publicity for the profession is expected when the Nader report receives full circulation. □

## American College of Surgeons Inducts Oklahomans

Among over 1,500 physicians who were inducted as Fellows of the American College of Surgeons on October 16th in Chicago were ten Oklahomans.

Those from Oklahoma were: Robert M. Herlihy, M.D., Enid; W. Kermit Baker, II, M.D., Edward H. Fite, Jr., M.D., Cecil Meares, M.D., of Muskogee; James P. Bell, M.D., and Bobby G. Smith, M.D., Oklahoma City; Robert L. Alexander, Jr., M.D., Okmulgee and A. Munson Fuller, M.D., Gerald E. Gustafson, M.D., and Edward O. Nonweiler, M.D., Tulsa. □

## Scholarships Awarded To Future Rural Physicians



First recipients of Oklahoma Rural Medical Education Scholarships, established by the State Legislature, meet the men instrumental in creation of the program for University of Oklahoma medical students. From left: William C. McCurdy, M.D., Purcell, scholarship board chairman, students Kent B. Murray, Bristow, and Richard C. Coalson, Hobart, Sen. Denzil Garrison, Bartlesville, student Jimmy Martin, Henryetta, Rep. James Connor, Bartlesville, and students James R. Blaine, Grove, and Donald O. Walker, Konawa.

The first six students with definite commitments to practice medicine in small Oklahoma communities are enrolled in the University of Oklahoma School of Medicine this fall.

Five of them are the initial recipients of grants ranging from \$2,500 to \$5,000 from the Oklahoma Rural Medical Education Loan and Scholarship Fund established by the State Legislature this year.

The sixth received an Oklahoma State Medical Association grant in a companion program financed by the members of the association.

The rural medical education scholars are:

Kent B. Murray, sophomore from Bristow, and freshmen Richard C. Coalson, Hobart, Jimmy Martin, Henryetta, James R. Blaine, Grove, and Donald O. Walker, Konawa, all holders of the first state rural medical scholarships; and David Walsh, Oklahoma City senior, who was awarded the first Oklahoma State Medical Association grant.

Each has agreed to "pay back" the loan by practicing in an Oklahoma community of less than 5,000 population for a minimum of two years after graduation and completion of internship and military obli-

gations.

The state-financed scholars will practice in towns whose need for a doctor is determined by the Board of Trustees of the Oklahoma Rural Medical Education Loan and Scholarship Fund.

Walsh, the OSMA scholar, will serve two years in a rural community.

Medical students who received the state grants met Rep. James W. Connor and Senator Denzil D. Garrison, both of Bartlesville, principal authors of the scholarship bill, and Doctor William C. McCurdy Jr., Purcell, chairman of the scholarship fund board and also of the OSMA Council on Rural Medicine, at a recent luncheon hosted by the medical school.

Said Doctor John P. Colmore, interim executive vice-president for Medical Center affairs:

"We are delighted to see this program get under way and grateful to all of the members of the Oklahoma State Legislature who were instrumental in passage of the bill, as well as to the Oklahoma State Medical Association. I sincerely hope it will help alleviate the shortage of physicians in the rural areas of Oklahoma." □



## Rapid Growth Seen On OHC Campus

Known as the Oklahoma Health Center, the area around the OU Medical School is developing rapidly into a large complex of health facilities. Continued growth was assured in early September when Oklahoma City's Presbyterian Hospital signed an agreement to purchase land in the center for a new, ultramodern teaching hospital.

By undertaking to purchase approximately 24 acres in the northwest corner of the health center campus, Presbyterian officially became the first major private institution to move into the complex. Site for the new hospital is bounded by 13th street on the north, Lincoln Blvd. on the west, Phillips Avenue on the east, and 11th and 10th streets on the south. It is owned by the Oklahoma City Urban Renewal Authority, and will be acquired by the Oklahoma Health Sciences Foundation

and then resold to the hospital.

In addition to the new Presbyterian Hospital, the site will accommodate Oklahoma Baptist University School of Nursing affiliated with Presbyterian, a new doctor's office building and a new office building to house the Oklahoma City Clinic, long linked to the Presbyterian.

New building activity is taking place all over the health center area. In final stages of completion is the new \$1 million office building of the Oklahoma Medical Research Foundation immediately north of the University of Oklahoma School of Medicine. Fifth floor of the new building is already occupied. Also under construction following ground breaking ceremonies in July is a new ten story building of the Oklahoma State Health Department and its accompanying three story laboratory facility.

Construction got underway in September on a \$2 million research wing addition to the Oklahoma City Veterans Administration Hospital that will become an important ele-

ment of the health center.

Construction of the twin twenty story apartment towers for student housing is projected to begin about the middle of next year. Grants totaling \$192,000 a year for the next forty years by the Department of Housing and Urban Development have been received by the medical school student housing office. The grants will provide a subsidy to finance construction of the twin towers. □

## New Anti-Chiropractic Publication Available

Another weapon to be used in the fight against the cult of chiropractic has been made available by the American Medical Association. A brochure entitled "What They Say About Chiropractic" has now been published listing anti-chiropractic statements by nineteen different organizations.

Writing and distribution of the new brochure was a function of the AMA's Department of Investigation. Immediately upon publication suf-

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Amy Gay, R.N.



ficient copies were sent to each state medical association so that they could be distributed to local legislators.

Among the anti-chiropractic statements to be found in the new brochure is one by the AFL-CIO taken from a "fact sheet" submitted by that organization to the United States Senate Finance Committee on September 15th of this year. The "fact sheet" said in part, "Care of patients should only be entrusted to those who have a sound scientific knowledge of disease and whose experience and competence render them capable of diagnosing and treating patients by utilizing all the resources of modern medicine. *Since neither chiropractic theory nor the quality of chiropractic education equip chiropractors to do this, the AFL-CIO opposes coverage of chiropractic services in the Medicare Program.*" (Italics ours)

One of the most devastating anti-chiropractic statements comes from the National Council of Senior Citizens. In the January, 1969 issue of "Senior Citizen News" the council said, "*Chiropractic treatment, designed to eliminate causes that do not exist while denying the existence of the real causes, is at best worthless—and at worst mortally dangerous.*"

The statement from the Consumer Federation of America said in part, "*. . . CFA is gravely concerned that Medicare coverage of chiropractic services would needlessly expose beneficiaries to potential health hazards—particularly the harm which would result when beneficiaries treated by such practitioners delay or avoid seeking proper medical care, . . .*"

According to Joe Crosthwait, M.D., Chairman of the OSMA Cults and Quackery Committee, possible uses of the new brochure will be studied by that committee at a meeting in early December.

The nineteen anti-chiropractic statements were made by the following organizations: U. S. Department of HEW, Task Force on Medicaid, National Advisory Commission on Health Manpower, American Public

Health Association, AFL-CIO, Consumer Federation of America, National Council of Senior Citizens, American Hospital Association, Association of American Medical Colleges, Health Insurance Benefits Advisory Council, Health Insurance Association of America, American College of Radiology, American Academy of Orthopedic Surgeons, American Cancer Society, National Association for Retarded Children, American College of Sports Medicine, and the American Medical Association. Two additional statements, making a total of 19, were taken from the book "At Your Own Risk" and from a ruling by a U. S. District Court involving a case in the state of Louisiana.

The AMA's statement on chiropractic has been endorsed by the Inter-specialty Committee of the American Medical Association which represents nineteen national medical specialty groups. In addition it has been endorsed by the American Academy of General Practice, American Academy of Pediatrics, American Congress of Rehabilitation Medicine, American Surgical Association, American Academy of Physical Medicine and Rehabilitation, American Broncho-Esophageal Association, Central Association of OB-GYN, National Tuberculosis and Respiratory Disease Association, American Thoracic Society, and the American Psychiatric Association. □

## DEATHS

### PAUL KIMMELSTIEL, M.D.

A distinguished professor of pathology at the University of Oklahoma Medical Center, Paul Kimmelstiel, M.D., died October 7th, 1970.

In 1936, the renal pathologist was co-discoverer of a kidney lesion associated with diabetes and resulting in the condition since known as the Kimmelstiel-Wilson syndrome.

A native of Hamburg, Germany, Doctor Kimmelstiel was educated at the University of Tuebingen and taught at Marquette University Medical School for eight years before accepting the OU appointment in 1966. Earlier he had taught at Harvard and the Medical College of Virginia and Charlotte Memorial Hospital, Charlotte, North Carolina.

### ROBERT E. COWLING, M.D.

1901-1970

A long-time Ada physician, Robert E. Cowling, M.D., died September 24th, 1970, in Ada. A native of Arkansas, Doctor Cowling graduated from the University of Oklahoma School of Medicine in 1935. The following year he established his practice in Ada, where he was active in medical affiliations, civic organizations and agricultural activities, particularly livestock.

### FRED E. WOODSON, M.D.

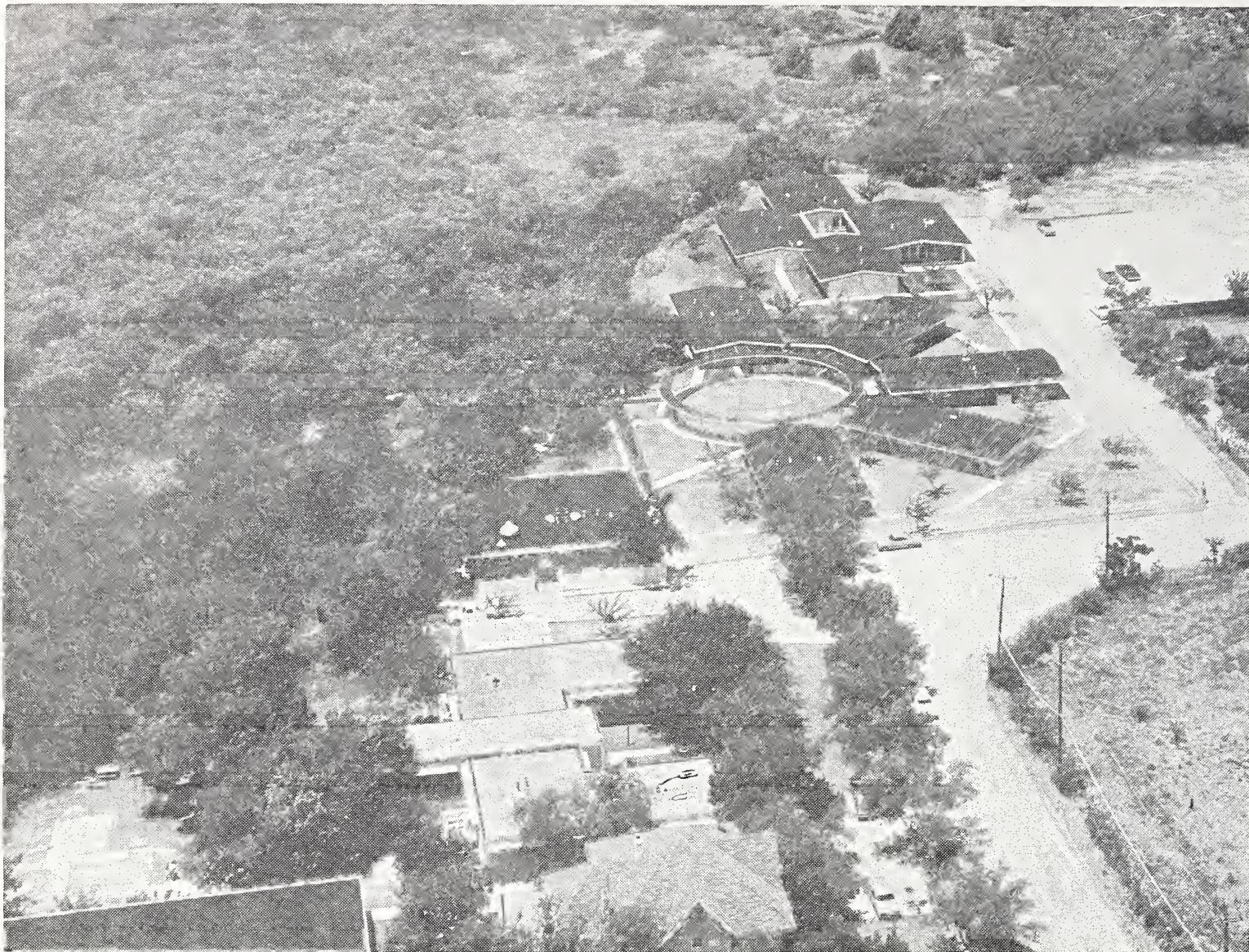
1896-1970

Tulsa anesthesiologist, Fred E. Woodson, M.D., died September 25th, 1970. A native of Staunton, Virginia, Doctor Woodson moved to Tulsa in 1916. Doctor Woodson graduated from the University of Oklahoma School of Medicine in 1931 where he later served as president of the Alumni Association.

One of the founders and a director of the Oklahoma Medical Research Foundation, Doctor Woodson was chairman of the Southern Society of Anesthesiology and a members of the International College of Anesthesia.

In 1968, the Auxiliary of the Tulsa County Medical Society chose Doctor Woodson as "Doctor of the Year." He was a Life Member of the Oklahoma State Medical Association. □





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## Oklahoma Physicians Studied Statistically

A statistical report on Oklahoma M.D.'s has been issued by the State Board of Medical Examiners. The report shows that as of October 15th, 1970, 2,562 M.D.'s were in practice in the State of Oklahoma.

An additional 1,206 physicians were eligible for practice but were out of state and 196 were in military service. This gives a total of 3,964 M.D.'s eligible to practice medicine in the state of Oklahoma.

Of the 2,562 in practice, 1,326 are graduates of the University of Oklahoma. Approximately 35 of the total number are retired or semi-retired, but keep their Oklahoma licenses in force.

In addition to the above, there are 43 physicians holding certificates of limited institutional practice in Oklahoma.

In the ten years following October 15th, 1960, the number of physicians in practice in cities of population over 100,000 increased from 1,054 to 1,454. During the same period of time the number of physicians in practice in cities with populations under 2,500 decreased from 202 to 120, for a loss of 82.

During the ten-year period cited above, the physician distribution in cities of population of less than 10,000 decreased by 123. At the same time the physician population in cities over 10,000 increased by 536. This means that in that ten-year period the number of physicians in the state of Oklahoma increased by 408.

In addition to the OU Medical Center, physicians in Oklahoma have taken their primary M.D. degree from seventy-eight different universities in the United States and twenty-two in foreign countries. This survey of medical schools represents only a five-year period starting in 1965.

Of the out-of-state graduates, the largest number come from the University of Arkansas followed by the University of Kansas, Tulane University, the University of Texas Medical Branch, the University of Missouri, Baylor University and University of Texas Southern Medical School. □

## Statewide Mammography Program Started

About 4,306 women have been screened for breast cancer through a pilot statewide mammography program. Some 54 cancers and four questionable cases were detected through mammography. Of this total, 30 cancers were found as the result of mammography alone, it was reported today.

Of those screened, about 3,571 of the women were over the age of 35.

The program, which began May, 1969, is a project of the Oklahoma Regional Medical Program and is financed through federal funds. Doctor Eugene A. Durso, associate professor in the department of radiological sciences at the University of Oklahoma Medical Center, heads the program.

Doctor Durso describes mammography as an aid for detecting tissue change by breast x-ray, which is effective in the early diagnosis of disease.

Mammography's greatest contribution in the detection of breast disease is its ability to detect very small tumors. These tumors are often not suspected by either the patient or examining physician, since they are not large enough to be felt.

Doctor Durso said there is a great need to promote public understanding of early detection methods and the value of early diagnosis in breast disease.

A native of Pennsylvania, Doctor Durso graduated from medical school at the University of Pittsburgh, where he took advanced training in obstetrics and gynecology. He practiced in these fields for eleven years. He later became interested in mammography and completed extensive training in the field of radiology with emphasis on mammography. He is certified by the American Board of Diagnostic Radiology.

Although mammography is not a new method of examining the breast, it is not used extensively in Oklahoma. A mammography unit has been established within the OU Medical Center. Mammography screening is also being done in Lawton. □

## Calhoon Promoting AMA-ERF Drive

OSMA President Ed Calhoon, M.D., is the prime mover behind a fund drive for AMA-ERF in the State of Oklahoma. A letter will be sent to all Oklahoma physicians in early December from Doctor Calhoon seeking their monetary support.

In the letter Doctor Calhoon points out that in 1969 the Oklahoma University School of Medicine received \$10,572 from the AMA Education and Research Foundation. In addition several thousand dollars has been loaned to medical students in Oklahoma since the loan program started in 1962.

Nationwide, 19,000 medical students, interns and residents have benefited from the student loan guarantee fund.

Regarding the contributions to the OU School of Medicine, Dean Robert M. Bird, M.D., said, "Our latest grant helped us establish and support a student financial aids office, a sorely needed central office to serve medical students in need of loans and scholarships. It would have been extremely difficult to establish this program without the AMA-ERF gift."

In his letter Doctor Calhoon said, "Physicians, as trustees of medical knowledge and skills, have both a responsibility and an opportunity to help materially in the support of medical education and medical research. Your American Medical Association Education and Research Foundation is an effective means through which you, individually can help."

The president then went on to point out that all gifts to AMA-ERF are tax deductible and he urged all members to contribute generously.

A special brochure on the OU Medical School AMA-ERF contributions is being prepared for distribution with the president's letter. The brochure will point out the expansion of the medical school and the part that the foundation's funds have played in it. □



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## AMA Clinical To Attract 7,500

Some 7,500 physicians, guests, medical students, residents, nurses, and other allied health professionals and industrial and scientific exhibitors are expected to attend the 24th Clinical Convention of the American Medical Association. Scheduled for November 29th-December 2nd, the convention will be held in Boston.

The program for the convention, under the supervision of Claude E. Welsh, M.D., Boston, has been planned by the Greater Boston Medical Community. This includes three medical schools, more than 30 major hospitals and some 9,000 physicians. Many of the panel moderators and program participants are Bostonians.

However, the scientific lectures also will represent a cross section of the entire United States. Speakers will come from more than two dozen different medical centers elsewhere in the nation.

The opening day, Sunday, November 29th, will be devoted to registration and to viewing and studying scientific and industrial exhibits at Boston's John B. Hynes Civic Auditorium. The scientific study program will get down to intensive work early Monday morning, November 30th, and continue without letup through Wednesday, December 2nd.

Beginning at 9:00 a.m. each day physicians will be able to select among three general scientific sessions each morning period, and three more each afternoon, for a total of 18 half-day general sessions. Each will cover one aspect of medical care.

A listing of subject headings for the general information scientific sessions gives an overall picture of the wide range of topics offered. The headings are: Surgery of the Gastrointestinal Tract, Coronary Heart Disease—One Teams' Approach, Applied Genetics, Problems in Pediatric Surgery, Pollution and the Physician, The Automobile Accident—The First Hours, Medical Practice in the Future, Respiratory Pathology and Pulmonary Failure, Drug Treatments for Hyperkinetic Overactive Children and Children with Learning Difficulties, etc. □

## Book Reviews

### TOBACCO AND YOUR HEALTH: THE SMOKING CONTROVERSY.

By Harold S. Diehl, M.D., Emeritus Professor of Public Health and Dean of the Medical Sciences, University of Minnesota. Paperback with 271 pp. New York: McGraw-Hill, 1969.

The foreword of this book on the health hazards of cigarette smoking states that "this book can save lives." There is little question about this. The author, a retired Professor of Public Health at the University of Minnesota, has accumulated a vast experience in this as well as other related subjects. Doctor Diehl states in his preface that "this book, TOBACCO AND YOUR HEALTH, presents scientific and medically accepted information and judgement on the subject." This it does. Unfortunately, the book has many shortcomings in its organization and style. The lack of the former is well exemplified by the preface (560 words) in which the author, instead of offering an outline of his purpose, quotes six different opinions by professional investigators speaking against cigarette smoking or magazines speaking on behalf of the tobacco industry.

The book is divided into 16 chapters but is essentially concerned with three main subjects: (1) the scientific proof of the relationship between cigarette smoking and lung cancer, cardiovascular and chronic pulmonary diseases; (2) the different approaches to giving up smoking; and, (3) the role of the government and the tobacco industry in the "smoking controversy."

Part I, the largest, consists of approximately 120 pages. Since this is a book written for the general public, it is difficult to understand why the author elected to include such a large number of graphs, tables and photographs taken from specialized magazines which the average reader will probably ignore. Part II (Who Smokes and Why, and Giving Up Smoking) is well written, of practical interest and will be enjoyed by smokers and non-smokers alike. Part III is a discussion of the role and duties of the government and law-

makers with this health problem as well as an exposé of the tactics used by the tobacco industry to confuse the public and perpetuate a feeling of uncertainty among the general public regarding the validity of the scientific evidence linking cigarette smoking with a number of diseases. This book, with the exception of two or three chapters, does not make easy reading. There is an excessive amount of overlapping between different chapters and often what amounts to an almost intolerable number of repetitions. The author's lament concerning the poor receptivity of the public at large for what appears to be overwhelming evidence against smoking may well be due, to a great extent, to the verbal and written rhetoric of those hired by the tobacco industry in its struggle for survival when compared with the cold scientific statistics presented in an unattractive package. *J. C. Lagos, M.D.*

### CARDIAC ARREST AND RESUSCITATION.

By H. E. Stephenson, Jr., M.D., Professor of Surgery, University of Missouri School of Medicine, Columbia, Missouri. Third edition. Cloth, 659 pp. with 223 illustrations. St. Louis: The C. V. Mosby Company, 1969. \$29.50.

This is the third edition of a text written on a rather narrow subject, but one that is of considerable importance. The subject is thoroughly discussed, both from theoretical and practical viewpoints, and an extensive and recent bibliography is included. Incidentally, the bibliography is arranged to include separately:

Books and Manuals

Available Films

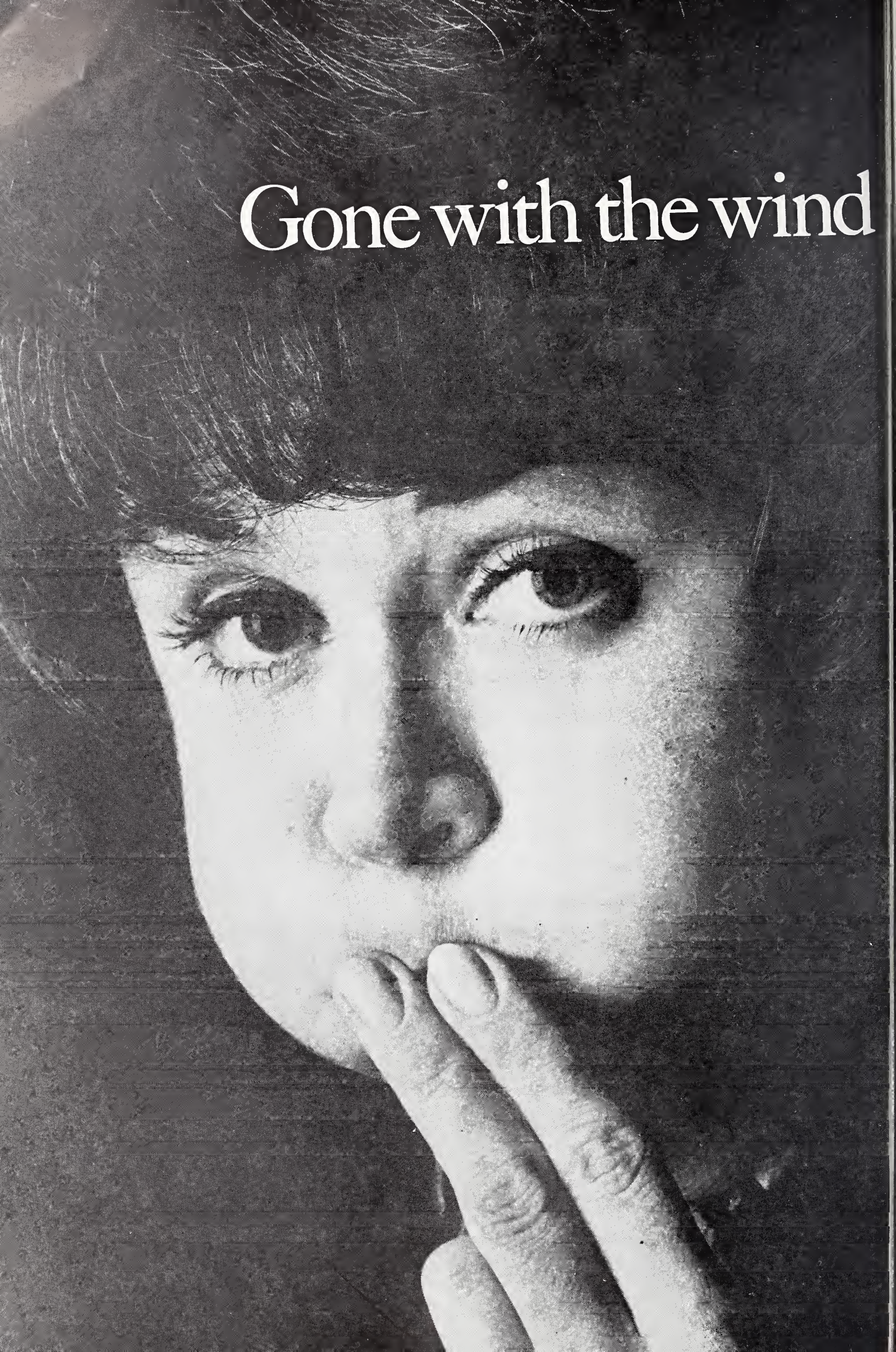
Slides

Periodicals

The detail in the text is such that as a whole it is of somewhat limited interest, but as a source should be included in emergency room, intensive care unit, recovery room, cardiac catheterization laboratory, coronary care unit and libraries. In addition  
(Continued on Page xix)



# Gone with the wind





(Continued from Page vii)

dition, it is a valuable addition to the libraries of surgeons, emergency room physicians, anesthesiologists and cardiologists. The arrangement of the book is logical and it is well indexed. The chapter on monitoring is somewhat brief as are those on the neonate and pediatric patients. For full value to the pediatrician and obstetrician, reading of other material in the book will make up the deficit. *Webb M. Thompson, Jr., M.D.*

#### **HANDBOOK OF LEGAL MEDICINE.**

By Alan R. Moritz, Professor of Pathology, Case Western Reserve University, Cleveland, Ohio, and R. Crawford Morris. Third edition. St. Louis: The C. V. Mosby Co. 1970. 238 pp. \$8.75.

While the title of this volume is entirely representative of its content, it is at the same time slightly misleading to the uninitiated. In point of fact, the book is a short synopsis of the basic and pertinent information required by *every practicing physician* in terms of the intelligent evaluation and disposition of cases of sudden natural death, time of death, identification, violent death and injury of various types, rape and abortion, the battered child, and poisoning, among a number of other related entities. The last half of the book addresses itself in outline and cartoon form to the physician's legal role in his practice of medicine. The subject matter is presented concisely and clearly. It is very easy reading indeed. Because only a vanishingly small percentage of practicing physicians have even been exposed in their medical school curriculum or thereafter to the subject material contained in this volume, the value of this Handbook cannot be overemphasized.

As I see it, there are two principal dangers inherent in the volume. The first is that it will not be read by those who most need the information. The second is that the reader, upon completion of the work, will consider himself an expert in this

specialty. As the authors stated in the preface to the preceding editions of the Handbook, the book "should be useful to many whose needs are such as not to require the more detailed consideration of the subject to be found in more voluminous or more specialized treatises." Examples of the latter might well include, in order of the reviewer's preference:

1. Taylor's Principles and Practice of Medical Jurisprudence. Edited by Keith Simpson. Two volumes. Twelfth edition. 1965. Distributed in the United States by Little, Brown and Co. Boston.

2. Legal Medicine, Pathology and Toxicology. Gonzales, T. A., Vance, M., Helpert, M., and Umberger, C. J. Second edition. Appleton-Century-Croft Inc. New York. 1954. (Out Of Print).

3. Gradwohl's Legal Medicine. Edited by Francis E. Camps. Second edition. 1968. The Williams and Williams Co. Baltimore. *James L. Luke, M.D.*

**ADRENERGIC NEUROTRANSMISSION.** Ciba Foundation Study Group. Edited by G. E. W. Wolstenholme and Maeve O'Connor. 123 pp. Boston: Little, Brown, and Company.

This little book is a concise presentation of our understanding of the role of norepinephrine at sympathetic nerve terminals. The investigators responsible for the major contributions of the past few years have summarized their results in seven reports, with additional discussion by 15 other scientists.

The physiological mechanisms for norepinephrine synthesis, release, and re-uptake are much more complex than the comparable system for acetylcholine at cholinergic nerve terminals. Unfortunately, the questionable view that acetylcholine is a necessary intermediate in the release of norepinephrine is the only chapter not followed by a discussion by the symposium participants. A report on histochemical localization

supports physiological studies of norepinephrine. The bulk of the book is composed of two chapters on norepinephrine metabolism and too an uptake into adrenergic nerve terminals. These are excellent for understanding the otherwise confusing variety of drugs that affect sympathetic nerve terminals. The final chapter on the involvement of "false" transmitters in the system is of direct pharmacological interest, as well as summarizing the whole picture of norepinephrine synthesis and release in a single diagram. *Roger Thies*

**THE ADOLESCENT PATIENT.** By William A. Daniel, Jr., M.D., Professor of Pediatrics and Director, Adolescent Unit, University of Alabama Medical Center, Birmingham, Alabama. Cloth, 444 pp. with 76 illustrations. Saint Louis: The C. V. Mosby Company, 1970.

This book, originally aimed at pediatricians, should be a "must" on the reading list of physicians of all specialists who encounter adolescents. Many years of experience with young people in clinic, practice, and his own home qualify Doctor Daniel for authorship. He proves himself not only a compassionate clinician but a sociologist and philosopher as well. The book is readable, provides a source of references, and aptly presents the needs of the adolescent patient. It does not provide all the answers but helps the physician develop background for improving his ability to understand and influence teenagers.

Doctor Daniel discusses the "natural history" of adolescence by describing processes of mental and physical development while emphasizing the important influence of the social milieu. He and his colleagues discuss a large variety of common adolescent problems. These chapters do not pretend to be a complete treatise on a given subject but describe aspects pertinent to the adolescent. At times the information seems scanty but recent references are listed to stimulate further study.



Large portions of the book have been set aside for problems involving several disciplines, such as reading disorders, deafness, and rehabilitation. The final chapter "The Parents of the Adolescent" presents adolescent problems in another light; every parent should read it!

In past years, the medical care of adolescents has been largely neglected. This book analyzes the needs of the adolescent patient and serves as a worthwhile guide for the physician. *Harriet W. Coussons, M.D.*

**URINARY TRACT INFECTIONS IN CHILDHOOD AND ITS RELEVANCE TO DISEASE IN ADULT LIFE.** By Victoria Smallpiece, M.D. 171 pages. St. Louis: The C. V. Mosby Company, 1969. \$9.50.

This small monograph provides a comprehensive review of various aspects of pyelonephritis and urinary tract infection in childhood and its relevance to renal disease in later life. The author reviews the literature on the incidence, cause, diagnosis, management and prognosis of the disorder and relates it to her own extensive clinical experiences. She uses case histories to illustrate certain pertinent points and reports on 343 cases of urinary tract infection which she has followed between 1948 and 1965. The author emphasizes that the disease process frequently may be silent. Possible methods of prevention are stressed.

The extensive documentation is most impressive but also reveals the inherent difficulties in comparing results from different investigators.

This book is to be recommended as an important reference. It could contribute to a better understanding of the natural history of the disease and the development of methods of prevention and a reduction in the mortality and morbidity from chronic pyelonephritis. There is a growing body of evidence that much of the chronic pyelonephritis of adult life has its origin during infancy and childhood. *Harris D. Riley, Jr., M.D.*



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**AMERICAN MEDICAL ASSOCIATION  
EDUCATIONAL AND RESEARCH FOUNDATION**

The American Medical Association-Educational and Research Foundation was born in 1963. It is a combination of previous programs, but now under one Foundation it has unified control and direction.

There are two fund raising projects in AMA-ERF for which The Woman's Auxiliary actively seeks funds. Last year our Oklahoma Woman's Auxiliary gave \$7,373.47.

**Funds for Medical Schools** provides a flexible aid to the deans of the medical schools. This money can be used as the need arises. Last year OU Medical School received \$10,572.00.

**Loan Guarantee Fund** provides long term loans to medical students, interns, and residents with several advantages over other type loan programs. The actual loan is made by a commercial bank, but the AMA-ERF holds money in their loan funds as a guarantee for the repayment of these loans. The repayment of these loans does not begin until full time training is completed. (Government loans begin repayment three years after medical school graduation.)

There are many ways to help the woman's auxiliary in these projects. Probably the most popular method is a donation through the use of Memorial, In Honor Of, and Think-

ing of You cards. The family or person is notified that a contribution to AMA-ERF has been made in their name. Your contribution may be designated to either of the above funds. If you choose funds for the medical schools, you may name the medical school of your choice. (This donation to your medical school is also credited as an alumni gift.)

Many counties have special fund-raising activities. From the state AMA-ERF chairman you may order Christmas cards to be imprinted, All-Occasion cards, memo-pads, playing cards, and toys. New this year are Doctor Rose's key-rings (made by Mrs. John W. Williams' father), and a Physician's Wives Plaque (a framed poem written by Mrs. Virgil Ray Forrester).

Please contact the AMA-ERF chairman for additional information or for special orders:

Mrs. John W. Williams  
419 South Grant  
Enid, Oklahoma 73701

We solicit the active support of all our physicians and their families for the American Medical Association - Education and Research Foundation. Help make our Oklahoma contribution grow!

Mrs. M. Thomas Buxton, Jr.,  
Editor ☐



A lame duck Congress, the first in twenty years, will reconvene in Washington around November 16th. A number of important bills are currently pending. Of particular interest to the medical profession is HR 17550, amending the Social Security Act on Medicare-Medicaid. This bill has already passed the house and is currently being studied by the Senate Finance Committee. Just before the adjournment for election, members of the Finance Committee adopted the so-called "Bennett Amendment" to the bill which would establish professional standards review organizations throughout the nation. Finance committee staff members are using the Congressional recess to tackle the job of putting the committee agreements into legal language. The draft to be submitted to the entire Senate must be approved by the committee members when they return to Washington.

**Three thousand striking Quebec specialists** began returning to the province last week to show their sense of duty at a time of grave political strife. The specialists, representing about 75 percent of all Quebec specialists, responded to an appeal made by leaders of the Federation of Medical Specialists. They had "withdrawn services" October 1st in protest to a harsh new medicare law scheduled to go into effect November 1st. On October 15th the provincial assembly passed a law conscripting physicians into practice. Under new legislation, a specialist can be fined \$200 to \$500 for each day he fails to practice. Federation officials are subject to daily fines ranging from \$5,000 to \$50,000 if they act to deter physicians from returning to their practices. The Federation said the return of the specialists was temporary and that its appeal was not made "out of fear of the law."

**At the end of 1969, 83.3 percent of the physicians in the United States were engaged primarily in patient care,** according to the AMA's Department of Survey Research. In

their recently published *Distribution of Physicians, Hospitals and Hospital Beds in the U. S.—1969*, the Department stated that patient care was the major activity of 270,737 physicians. Of this number 82,571 were in hospital based practice, and the remainder were in office based practice. The 83.3 percent figure for 1969 represented an increase over the 1968 figure of 82.6 percent.

**A minor tax break has been authorized by the Internal Revenue Service.** IRS has increased for the 1970 tax year the rate at which automobile mileage may be calculated on income tax returns. The rate for computing the mileage costs for rendering services to a charitable organization or for transportation for medical care may be figured at six cents a mile. The rate for figuring costs of using an automobile for business purposes goes up to 12 cents a mile.

**AMA's 1971 budget, with anticipated revenues of \$37,295,034 and proposed expenditures of \$35,762,754 was approved in early October by the AMA Board of Trustees.** The \$1.5 million difference between the anticipated revenues and expenditures will be used to augment the association's reserves which were seriously depleted by the 1970 deficit. At the same board meeting the McCann-Erickson Advertising Agency was selected to study the feasibility of a specialized communications program focusing on educational efforts regarding narcotics, nutrition and other problems affecting the nation's health. In addition, the board authorized a \$50,000 grant to WTTW, a Chicago television station, to assist in the production of a 39 week series of color T. V. programs on medical needs and services. The series would be broadcast coast to coast on the National Educational Television Network.

**The fall campaign appeal for AMA-ERF contributions to aid financially hard pressed medical schools and students is getting underway.** (A story on Oklahoma's efforts can be found in the News Section of this issue of the Journal.) As of September 15th there were 23,800 student loans outstanding and AMA-ERF's commitment for outstanding notes and interest was \$38.5 million. As of September 30th, contributions from medical societies, individual physicians, and the women's auxiliary totaled \$707,971.



The

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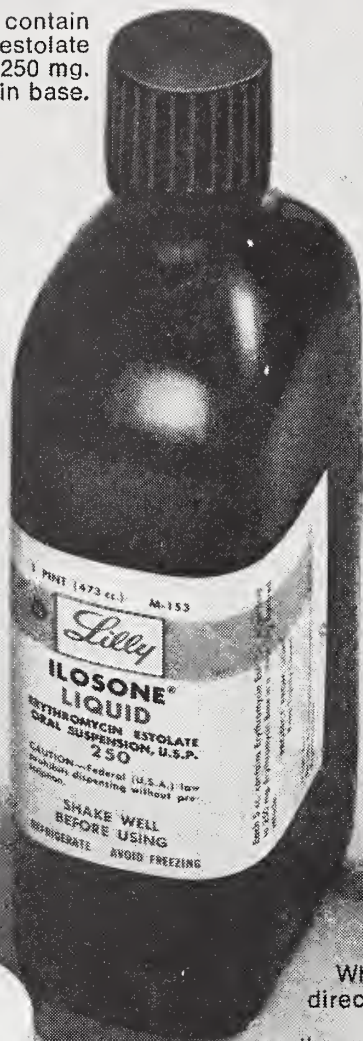
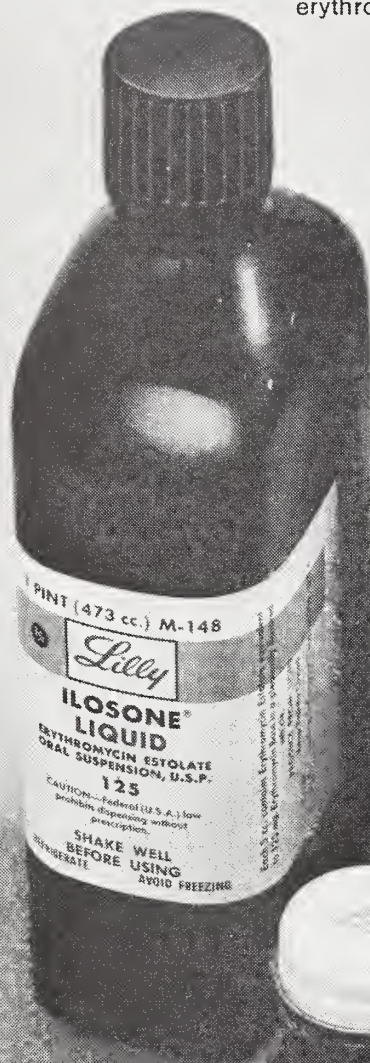
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The Editors and Staff  
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extend to you and your loved ones  
our best wishes for  
A Joyous Holiday and  
A Happy New Year.







The Midwinter Session of the AMA met in Boston November 28th to December 2nd. Your state association was represented by staff and elected representatives.

We were vocal in opposition to PSRO and certain clauses in PRO.

We made it crystal clear that we were for peer review, but that we felt Oklahoma's problems were unique to Oklahomans and should be approached and solved within the framework of existing systems. We stated that to accept the Bennett Amendment without knowing its precise language would be a poor solution indeed.

There was much talk about medical care being furnished through foundations. Many states feel this is the solution to rising costs and that service on a capitation basis with prepaid medical care is the answer. I see this as fixed fee and/or a fee schedule that does not allow much expansion or freedom for individual initiative. I must say I am proud of Oklahoma for its independent thinking and feel that its physicians are capable of mapping a future course for professional care of its people without sacrificing all to federal bureaucracy.

Our AMA president, Doctor Walter Borne-

meier, stressed the need for more practicing physicians and a more equitable distribution. He mentioned streamlining curricula and shortening the length of time required to complete medical school. I would remind those who are so vocal in their desire to produce more physicians that this could have very profound effects on health care were we to flood the field with ill-trained men. Health care is an extremely emotional issue and the bureaucrat sees it as a catalyst to total socialization of our great country.

Sometimes I think we get so engrossed in our problems we fail to appreciate our many blessings in a Christian nation. The season of "Peace on Earth Good Will Toward Men" is now with us. I find it inspiring indeed to speculate on the Divine Birth and contemplate the impact the Christ Child has had on generations of men. Once again I would recommend Luke's version of this blessed event. I like it particularly well because Luke was a physician. His words are articulate, beautiful and simple. Everything that needed to be said, it seems, was said. Shall we then dwell on these thoughts and ponder how we might improve relationships with our fellowmen so the Christmas Season may have greater spiritual meaning for us all? With this in mind, may I wish you a Merry Christmas and a Happy New Year. □

Sincerely and fraternally,

*E. L. Carlson M.D.*



## A Nurse Staffed Mobile Coronary Care Unit

GERALD L. HONICK, M.D.  
THERESA NAGEL, R.N.  
ANN DANIELS, R.N.

*A mobile coronary care unit staffed by experienced, well-trained nurses can be effective in reducing the early deaths from acute myocardial infarction.*

**A**CUTE myocardial infarction is the apparent cause of nearly 600,000 deaths each year in the United States. Since two-thirds of the fatalities take place outside the hospital, improved systems of care for these cardiac emergencies have been emphasized by various groups. Among the proposed plans is the Mobile Coronary Care Unit, as described by Pantridge and Geddes,<sup>1</sup> and others.<sup>2,3</sup>

The Mobile Coronary Care Unit (MCCU) of St. Anthony Hospital commenced its operation in Oklahoma City during October, 1969. From its inception it was decided not to dispatch physician specialists or general medical residents with the MCCU. Two experienced nurses from the specially trained staff of the hospital's Coronary Care Unit accompany the driver of the emergency vehicle. Calls are accepted without delay whether made by a physician, policeman, fireman, or any bystander who believes he is witnessing an acute heart attack.

On arrival the nurse in charge quickly assesses the clinical state by noting the patient's color, respiration, pulse, blood pressure, and appearance of severe pain or anxiety. Another nurse immediately places on the chest two paddles, which transmit the cardiac rhythm to a small oscilloscope. The driver carries the heavier equipment, assists the nurses and administers oxygen under their direction. After the initial evaluation, an electrocardiogram may be recorded by the placing of the usual leads. The intravenous injection of five percent dextrose in water is started by use of an intracath, and thus a line is available for intravenous medications.

According to the initial plans for this program, the patient's physician would meet the MCCU at the site and he would direct the management. However, the physician was seldom present. On most occasions the two nurses assessed the clinical state and administered treatment according to orders previously prepared by the Coronary Care Unit (Figure 1). The orders were signed later by the physician who assumed responsibility for the patient. When the cardiovascular status appeared stable, the patient was transported to the hospital of his choice. The nurse did not make disposition of the patient without discussing the clinical findings and ECG with the patient's physician at the scene or by telephone. When the private physician could not be located, the pa-



Figure I  
Oklahoma City, Oklahoma  
PHYSICIAN'S ORDERS  
MOBILE CORONARY CARE UNIT

1. Start I.V. of 500cc D5W with intracath to provide open vein. Use pediatric micro dip on all I.V.'s.
2. If patient is clammy and shocky:
  - A. Add 100 mg Aramine to 500cc D5W and titrate while monitoring blood pressure.
  - B. If heart rate is slow, add 1-3 mg Isuprel to 500cc D5W and titrate while monitoring heart rate and blood pressure.  
—Do not exceed heart rate 130 or over 40 gtts/min.
  - C. If patient is not receiving Dig., give Ouabain 0.5 mg or Lanoxin 0.5 mg I.V. SLOWLY.
3. If patient appears to be in pulmonary edema:
  - A. Give 50 mg Edecrin I.V.
  - B. Check on digitalis, if patient is not receiving Dig., give Ouabain 0.5 mg or Lanoxin 0.5 mg I.V. slowly.
  - C. Apply rotating tourniquet.
  - D. Foley catheter.
4. If PVC's, give Lidocaine 1 mg/kg bolus I.V., follow with 500cc D5W with 100cc 2% Lidocaine (2 gm) using pediatric infusion set. Regulate drip between 18-72 gtts/min. (1-4 mg/min) to control PVC's.
5. Sodium Luminal gr. 1-2 I.V. to prevent or control twitching that may occur from Lidocaine or for apprehension.
6. If pulse rate is below 60, give Atropine 0.8 mg I.V. If no response, use Isuprel 1 mg per 500cc to maintain pulse 60-80.
7. If ventricular fibrillation is present, defibrillate immediately with DC defibrillator at 400 watts seconds. Do not wait unless uncertain of rhythm.
8. Give Sodium Bicarbonate 3.75 gm (50cc) I.V. stat and then drip 500cc bottle of Sodium Bicarbonate solution 7-10cc/min (150 gtts/min.)
9. If apprehensive, in severe pain or extremely restless, give either Demeral 50 mg I.V. or Morphine Sulfate gr. 1/8 I.V. May repeat in 15 min. if not relieved.
10. If resuscitation is indicated, place patient on the HLR.
11. If nausea or vomiting occurs give Vistaril 50 mg, Dramamine 50 mg, or Tigan 200 mg I.M.

Attending Physician

tient was brought to the hospital emergency room for final clinical disposition.

Recently there has been an average of

Figure II  
FIRST 400 MCCU CALLS

DIAGNOSIS	CASES		
DOA (site of pickup)	46	—	12%
Acute myocardial infarction	81	—	20%
Coronary insufficiency	27	}	— 20%
Angina pectoris	54		
Congestive failure	34	—	8%
Arrhythmia	12		
Hypertension	1		
Pulmonary embolism	2		
Cerebral Vascular Accident	13		
Seizure	13		
Syncope	9		
Emphysema	10		
Chest wall myalgia	2		
Cholecystitis	1		
Hypoglycemia	1		
Drug reaction	3		
Upper Respiratory Infection	4		
Femoral thrombosis	1		
Undetermined (left at home)	11		
Transfer	6		
Acute Alcoholism	15	}	— 17%
Hysteria	17		
False alarms	37		
Total		400	

twelve calls a week for the MCCU. The diagnoses for the first 400 calls are shown in Figure 2. As might be expected, twenty percent were not medical emergencies, but were caused by acute alcoholism, hysteria, or "false alarms." Acute cardiac problems, including sudden deaths before the unit arrived, accounted for two-thirds of the calls. The remainder were "bona fide" calls for medical conditions which resembled heart attacks to the layman.

Whether or not an individual patient would have survived without the benefit of the prompt treatment by the MCCU cannot be affirmed. The authors believe, however, that

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Figure 3-A

the speed and efficiency of the emergency team contributed materially to the survival of one out of every five cardiac patients. Prompt care was especially life-saving in those with ventricular irritability, ventricular fibrillation, and pulmonary edema.

The equipment of the MCCU is not elaborate but includes basic essentials. The ve-

hicle is a Ford mini-camper which allows personnel to stand erect (Figures 3-A and B). It contains a battery-operated defibrillator with small oscilloscope (Life Pak), an electrocardiograph, a heart-lung resuscitator, suction apparatus, oxygen tanks, and selected medications. The initial cost of these items is listed in Figure 4.

The nurses appointed to the Mobile Coronary Care Unit are given an additional salary. When the Unit is not on call, these nurses serve in the hospital Coronary Care Unit. The Coronary Care Unit appears somewhat overstaffed when the MCCU is not out on a call, but when it is out, the hospital unit may be understaffed. For the eight coronary care beds, at least four nurses are present on each eight hour shift. When two nurses are on a MCCU call, only two are left at the hospital Coronary Care Unit. If additional help is needed to cover emergencies, nurses may be called from other duties.

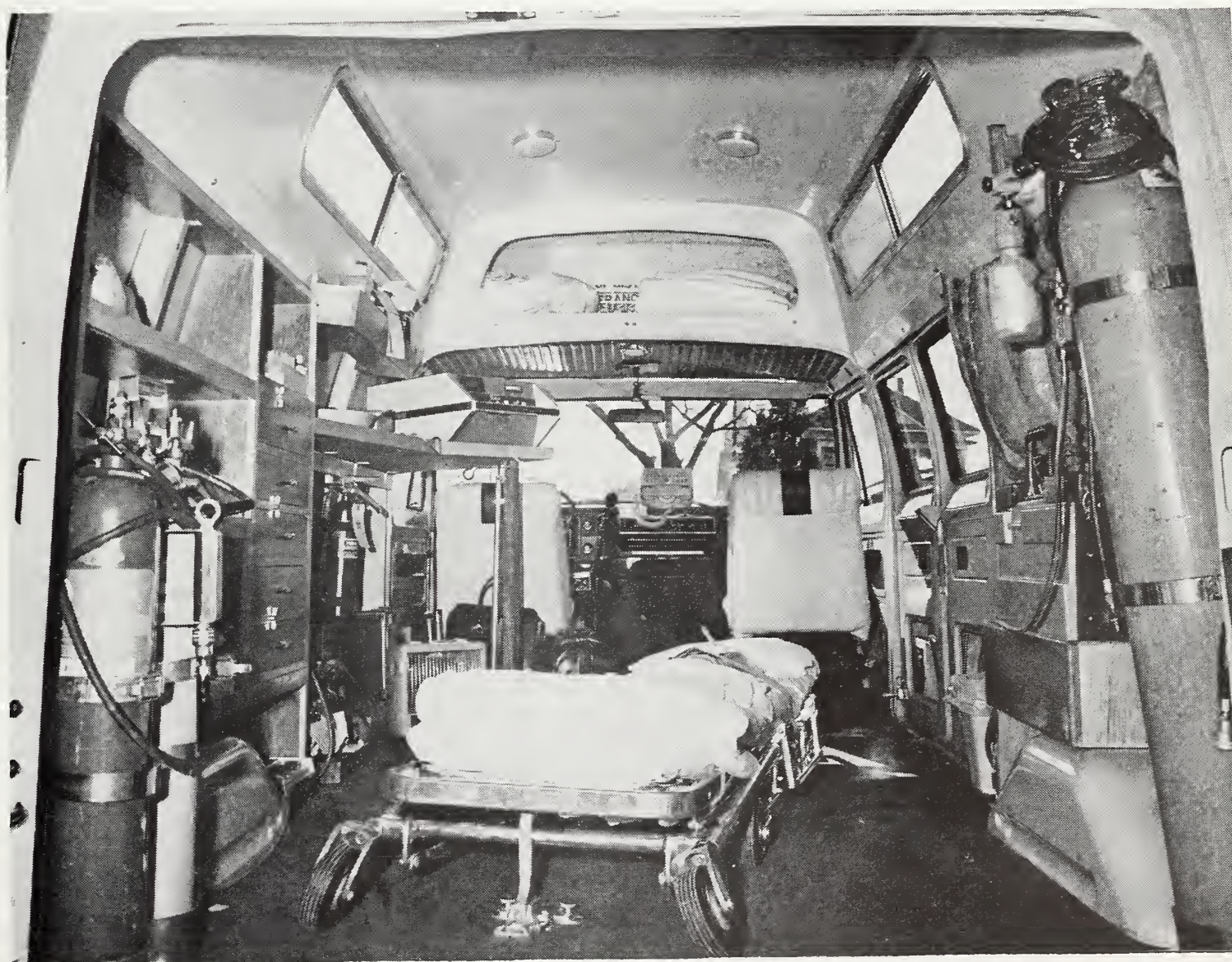


Figure 3-B



Figure IV  
MOBILE CORONARY CARE UNIT COSTS  
St. Anthony Hospital  
(Set up costs of the unit)  
NOVEMBER, 1969

Ford Minicamper	\$4,029.56	
Tags	114.15	
Special Tires	153.33	
		4,297.04
Engineering Costs:		
Labor	\$ 593.32	
Materials (wood, paint, etc.)	606.43	
Carpet	47.50	
Siren and red lights	309.00	
Interior lights and switches	16.65	
O <sub>2</sub> line	30.00	
Camp stools	1.46	
		1,604.36
Technical Equipment:		
Life pak	\$2,524.75	
Heart-Lung-Resuscitator	1,328.56	
ECG - Recorder (portable)	1,034.63	
Cot	355.35	
Drugs	76.00	
Suction Apparatus	167.00	
Stethoscope & Sphygmomanomter	79.45	
Anesthesia equipment	93.50	
O <sub>2</sub> regulators, etc.	102.00	
		5,761.24
Miscellaneous:		
Two-way radio	\$1,318.67	
Insurance	646.00	
Vehicle	541.00	
Equipment	105.00	
Printing	175.00	
		2,139.67
TOTAL		13,802.31

The MCCU drivers are off-duty firemen. These individuals are ideal for such a unit. Not only are they dedicated to community service, but they have been trained in cardio-pulmonary resuscitation and in handling many other emergencies. They are aware of street locations, can conduct the vehicle to the site with promptness, and are dependable assistants to the nurses during the emergency.

Measures have been taken to diminish the confusion of potential patients who might otherwise experience difficulty in obtaining the unit. Small cards (Figure 5) were printed with the telephone number of the Unit, as well as spaces for inserting the office and home telephone numbers of the patient's physician. Patients are advised to keep these phone numbers in billfold or purse, and tape

them to each telephone used by immediate members of the family. Some typical symptoms of coronary artery disease are listed on the back of the card. The first paragraph contains a description of the typical discomfort. The second paragraph includes the typical findings of angina pectoris and advice for the patient to see his physician. The last paragraph provides the typical findings of myocardial infarction and the recommendation to call the unit first and then the private physician.

The cards were distributed to all physicians in the county with the suggestion that they give them to their patients with coronary disease who might require the MCCU in the future. Also, all pharmacists in the county were sent cards to give to their customers, especially to those purchasing cardiac medications.

St. Anthony Hospital has charged a basic fee of \$50.00 per call, plus \$10.00 for each fifteen minutes with the patient, and the cost of drugs and supplies. These charges will be reevaluated after sufficient cases. If the patient is admitted to the hospital, this expense is added to the first day charge. This system has been accepted by the local insurance carriers.

DISCUSSION

Various plans have been proposed to reduce the pre-hospital death rate of myocar-

Figure V  
IN CASE OF  
SUSPECTED HEART ATTACK, CALL:  
St. Anthony Hospital  
MOBILE CORONARY CARE UNIT  
236-0191

Doctor \_\_\_\_\_  
Office \_\_\_\_\_  
Home \_\_\_\_\_  
- - - - -

Discomfort from the heart may give tightness, squeezing, or heavy pressure under the breast bone and may move into the neck, arms, or upper abdomen. (Sharp, stabbing, fleeting chest pains associated with tenderness in the chest **do not** originate in the heart.) Heart discomfort may be variable but **usually** is brought on by exertion, especially after meals, and is relieved promptly by stopping the exertion and resting. If this occurs, see your doctor. Shortness of breath, cool clammy skin, pale grayish color and persistent chest discomfort may be a heart attack. Call the Mobile Coronary Unit and your doctor.



dial infarction. In our hospital Coronary Care Unit active since 1965, nurses have had special training and experience. They have been instructed to defibrillate patients, as well as give drugs according to prearranged physician's orders. This system has worked well in our hospital and we believed it appropriate to continue the same policy for the Mobile Coronary Care Unit. In addition, the MCCU nurse has been assigned and has accepted the responsibility of recognizing and treating acute pulmonary edema at the site of the emergency call.

Some may doubt the propriety of giving the nurse so much responsibility in the absence of a physician. It is our contention that the trained nurse's judgment in recognizing clinical emergencies and initiating treatment in the Coronary Care Unit and other divisions of the hospital, has proved satisfactory. Rigid restriction of the nurse's emergency actions could lead to the death of the patient before admission to the hospital. Needless to say, if nurses are expected to evaluate and treat acute cardiac problems, a responsible physician must be confident of the ability of each designated nurse to recognize arrhythmia, shock, and congestive failure, and her emotional stability during crisis situations. Only with these attributes could she efficiently carry out prearranged orders. It would be foolhardy to give such responsibility to a nurse without providing her with supervised experience and specific training.

An alternate scheme of organization might entail the transmission of the electrocardiogram back to the central unit, and then the location of a physician to interpret it. In our opinion, this would introduce technical difficulties which would delay the required emergency treatment. To cite an example, immediately after the initial examination while the paddles were on the patient's chest, the MCCU nurse noted a brady-arrhythmia which was soon followed by ventricular fibrillation. The team did not take time to connect electrodes and record a written tracing, but immediately proceeded to defibrillate the patient as quickly as possible. Thus, this patient promptly regained a normal sinus

rhythm and became conscious. The delays inherent in recording and transmitting an electrocardiogram for interpretation and treatment suggestions would probably have resulted in the patient's demise.

Some physicians have expressed reluctance about the proposed wide distribution of informative cards about the MCCU and public education. Other physicians, however, believe that public education must be undertaken in order to reduce the high death rate during the first one to two hours after the onset of symptoms. Moss<sup>4</sup> reported an average delay of three and one-half hours before a patient reached a decision to seek medical aid. Since the wide distribution of the cards this MCCU has not experienced an increase in false alarms. We have utilized brief radio and television spot announcements, and delivered talks to civic organizations about the MCCU and the typical symptoms of angina and myocardial infarction. It is our strong feeling that such public education is essential in order to reduce the tremendous death rate during the pre-hospital phase of acute cardiac emergencies.

The MCCU has been favorably received in Oklahoma County because patients with heart disease feel reassured by its availability. With the continued provision of such a valuable community service, generous donations to defray part of the costs may be anticipated from public-spirited citizens. □

#### ACKNOWLEDGMENT

I wish to acknowledge the help of R. Palmer Howard, M.D., Professor, History of Medicine, University of Oklahoma Medical Center, in preparation of this manuscript.

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# Barium Appendicitis— Report of A Case

O. W. DEHART, M.D.

*Barium, used for gastrointestinal radiographic purposes, is ordinarily an innocuous substance, but its routine use can occasionally result in serious sequelae.*

THE CONSEQUENCES of the retention of barium in the otherwise normal appendix has long been a point of contention. It is generally conceded that retained barium may result in acute appendicitis by the process of lumen obstruction. Vukner and Trummer<sup>1</sup> report a case occurring twelve days after barium enema during which the appendix visualized. Young<sup>2</sup> reported three cases occurring ten days, nine days, and 15 weeks respectively, following barium studies during which the appendix visualized in each patient. Gubler and Kukral<sup>3</sup> described four such cases occurring at intervals up to four years following barium studies. The following case is an instance of acute appendicitis developing four months after barium retention.

## REPORT OF CASE

A thirty-two-year-old male school teacher

had diagnostic barium studies of both the upper and lower gastrointestinal tract on July 31, 1969. During the barium enema, which was performed first, the appendix did not visualize. The barium was not followed through the small bowel; therefore, subsequent filling of the lumen of the appendix was not demonstrated.

On December 4, 1969, he was admitted to the hospital with a 24-hour history of lower abdominal cramping pain, nausea, anorexia, and urgent, semi-liquid stools. His oral temperature was 99.8° F. The abdomen was soft with hypoactive bowel sounds. There was diffuse lower abdominal tenderness with localized, marked tenderness and involuntary guarding in the right lower quadrant. Rectal examination did not reveal the presence of tenderness and no masses were palpated. The leucocyte count was 19,500 per cubic millimeter with 93 percent polymorphonuclear neutrophils. The urine contained acetone but was otherwise unremarkable. A flat plate of the abdomen (Figure 1) revealed an opaque object morphologically similar to a bullet. An appendectomy was performed shortly after admission. The appendix was grossly inflamed and its base contained a firm, movable, cylindrical mass which completely occluded the proximal lumen. Inspection of this mass revealed it to be a white, chalk-like object, the distal end of which was convex and corresponded to the shape of the lumen of the tip of the appendix.





Figure 1

Pathological examination revealed the appendiceal wall to be heavily and diffusely infiltrated by acute inflammatory cells and there was a thin layer of fibrin and leucocytes on the serosal surface. Chemical analysis of the intraluminal mass confirmed the identity of barium sulfate. The patient developed a superficial wound infection subsequent to dismissal from the hospital, but otherwise, experienced an uneventful recovery.

#### COMMENT

The etiology of acute appendicitis is not always apparent at the time of surgery, but the presence of a fecalith is not infrequently encountered and is generally believed to be a causative factor through the mechanism of obstruction. Felson and Barnard<sup>4</sup> ex-

---

*A graduate of the University of Oklahoma School of Medicine in 1961, Ollie W. Dehart, M.D., is now a general practitioner in Vinita, Oklahoma. He is a member of the Oklahoma Chapter of the American Academy of General Practice and the Alpha Omega Alpha.*



Figure 2

press the opinion that the presence of an appendiceal calculus increases obstruction and distention more than in simple acute appendicitis. Perforation is said to occur more frequently in an obstructive appendicitis and has been seen in as many as forty-seven of ninety-nine reported cases.<sup>4</sup>

Patients with suspected appendicitis are seldom questioned concerning previous barium studies of the gastrointestinal tract and abdominal x-rays are not routinely made in the usual case of appendicitis. This may explain the infrequency of reported cases of barium appendicitis. In most of the reported cases of appendicitis developing subsequent to the introduction of barium into the gastrointestinal tract, its presence was not known prior to surgical intervention. Young<sup>2</sup> has recommended that elective appendectomy be considered for the patient whose appendix retains barium longer than one month following radiographic studies. Beck and Winter,<sup>5</sup> however, state that they do not consider retained barium to be of importance in the development of appendicitis. It would appear from this case, that there can indeed be a sequence of events consisting of concretion, luminal obstruction and ultimate



Appendicitis / DEHART

acute appendicitis following the introduction of barium into either the upper or lower gastrointestinal tract. □

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

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# Ischemic Colitis: A Review

CLARKE STOUT, M.D.

*Although virtually unknown before 1960, ischemic colitis is now being recognized frequently. Because of the ever advancing age of our patient population, this frequency will probably increase yet further.*

## INTRODUCTION

IN 1966, Marston, *et al.*,<sup>1</sup> published a report which brought into sharp focus the various clinical syndromes that may result from ischemia of the colon. They used the term, "ischemic colitis," and emphasized the fact that the disease was often reversible. The subsequent description of a large number of patients with ischemic colitis<sup>2-9</sup> suggests that the disorder is not rare.

Ischemic colitis was known in the past by a variety of names, including segmental colitis,<sup>10</sup> acute segmental ulcerative colitis,<sup>11</sup> benign stricture of the colon,<sup>12</sup> and so forth. Surgeons were among the first to appreciate the relationship between patchy mucosal necrosis of the colon and compromise of its vascular supply in patients with recently resected infrarenal aortic aneurysms.<sup>13-17</sup> Although the incidence of this postoperative complication was usually much less than ten percent, the study of Bicks, *et al.*,<sup>2</sup> (vide infra) suggests that mild ischemic damage

to the colon may occur much more frequently following abdominal aortic aneurysmectomy. Because we are treating an increasingly elderly and atherosclerotic population in the United States, it seemed worthwhile to review the subject of ischemic colitis.

## CLINICAL FINDINGS

Ischemic colitis is a disease of elderly people. The average age among Thomas's<sup>6</sup> series of 36 patients was 62 years, and among Bicks, *et al.*'s<sup>2</sup> series of 19 patients was 68 years. The mean age in two smaller groups of patients was 65<sup>4</sup> and 70.<sup>5</sup> The typical presenting complaints are abdominal pain and rectal bleeding, often accompanied by diarrhea. Abdominal distention and vomiting are also frequently seen. The disease may progress rapidly to perforation within a day or two, or more commonly, may smoulder along for several weeks, eventually healing with or without stricture formation. Marston, *et al.*,<sup>1</sup> separated their patients into three groups according to the clinical course. The first group included patients with full thickness infarction of the colon (gangrenous type); the second, those with infarction of the mucosa and submucosa which later healed, leaving fibrotic strictures (stricturing type); and the third, those with infarction of the mucosa and submucosa which healed without demonstrable residuals (transient type). In Thomas's<sup>6</sup> series of 36 patients with ischemic colitis, one had the gangrenous type, 24 had the stricturing type, and 11 had the transient type. Bicks, *et al.*,<sup>2</sup> have point-



ed out that the presenting symptoms may be quite minor. Several of their patients noted only loose stools, which did, however, contain occult blood. Ischemic colitis often produces some degree of functional intestinal obstruction, which may occasionally be pronounced.

#### RADIOGRAPHIC FINDINGS

Initially, mucosal edema and hemorrhage produce smooth bulges into the lumen of the bowel (thumb-prints) which are visible on barium enema. Within several days, these areas of mucosa slough leaving irregular shallow ulcers. With extensive infarction, the edematous mucosa may become redundant enough to produce pseudopolyps.<sup>18-22</sup> Eventually the mucosa regenerates, and the radiographic appearance returns to normal. The bowel is less distensible during the acute and healing stages of the disorder, but this abnormality may also disappear completely within a month or two. The overall appearance on barium enema depends upon the extent of the colon involved. In general, the distribution of lesions is patchy, although the splenic flexure is usually the most severely affected, and the right colon is often spared. Distention of the small intestine and proximal colon due to functional obstruction may be seen on plain films of the abdomen during the acute stages of the process. Ischemia may also produce focal spasms of the colon which simulate carcinoma on barium enema,<sup>23</sup> and intestinal obstruction may be more pronounced in these instances. Dilatation of a segment of gut which has shown recent evidence of ischemic damage is an important sign of full thickness necrosis.<sup>24</sup> The fibrotic strictures which result from ischemic colitis are usually moderate in length (up to 15 cm.),<sup>25</sup> and the transition between the stricture and the normal bowel is often gradual, producing a funnel-like appearance.<sup>6</sup> The strictures may be longer, however, and sacculations of the bowel also may be seen in the chronic stages of the disease. The latter change consists of multiple out-pouchings on the antimesenteric border of the affected segment. The cause of these sacculations is not clear, but they may be confused with diverticuli.<sup>1, 6, 25</sup>

#### PROCTOSCOPIC FINDINGS

Although Marston, *et al.*,<sup>1</sup> thought that ischemic colitis could be differentiated from idiopathic ulcerative colitis by the absence of rectal involvement in the former, several authors<sup>2, 5</sup> have subsequently shown that ischemic colitis frequently affects the rectum. In very recent infarction, the mucosa appears edematous and friable. Shortly thereafter, hemorrhage into the necrotic area may produce dark red cystic lesions which encroach upon the lumen. With extensive infarction, polypoid masses of edematous and hemorrhagic mucosa may fill the lumen. After several days, the above described lesions slough leaving irregular ulcers, which eventually heal. The ulcers may be either longitudinally or circumferentially oriented. Fibrotic strictures may also be seen through the sigmoidoscope, with the fibrous tissue imparting a grayish-white color to the mucosa.<sup>2, 5, 26</sup>

#### PATHOLOGIC FINDINGS

The pathologic changes in ischemic colitis are characteristic, but none could be considered truly pathognomonic. Initially, the mucosa becomes necrotic, presenting a ghost-like appearance similar to that seen in autolysis.<sup>5</sup> The submucosa then becomes edematous and infiltrated with neutrophils and hemorrhage. Fibrin thrombi are commonly seen in the small mucosal and submucosal vessels,<sup>2</sup> and the mucosa may then slough, leaving relatively clean ulcers which penetrate to the muscularis mucosa. The infarcted areas are then replaced by granulation tissue which eventually becomes fibrotic. The regenerated mucosa is usually low, with a decreased number of glands. When the muscular layers become infarcted, the histologic appearance is quite similar to that seen in myocardial infarction. During the healing stages of ischemic colitis, hemosiderin laden macrophages are often seen scattered throughout the involved tissues. Morson<sup>25</sup> feels that the presence of these cells strongly suggests an ischemic etiology, but others<sup>5</sup> have questioned the specificity of this finding. With healing, smooth tapering strictures may be formed. The submucosa often



becomes remarkably thickened by fibrous tissue. Occasionally, focal strictures and peculiar lesions, such as sacculations, may occur.<sup>1, 25</sup>

Since the colon contains numerous bacteria, infection may complicate any of the above described stages of ischemic colitis. When this occurs, the additional necrosis and inflammation tend to overshadow the ischemic changes.

### PATHOGENESIS

Ischemic colitis may result from thrombotic or embolic occlusion of the inferior mesenteric artery.<sup>27</sup> In general, however, sudden large mesenteric artery occlusions are not found in these patients.<sup>6</sup> Much more commonly, ischemic colitis results from a combination of failure of the general circulation and atherosclerotic stenosis of the orifices and proximal portions of the main arterial trunks which conduct blood to the intestine (the celiac, superior and inferior mesenteric and internal iliac arteries). Failure of the general circulation is usually due to arteriosclerotic heart disease with congestive heart failure, decreased cardiac output as a result of myocardial infarction, and so forth. Shock or hypotension from any cause also may be responsible.<sup>28-30</sup> The ways in which these changes in the general circulation affect mesenteric perfusion are not clearly understood. This subject has been recently and concisely reviewed by Price, *et al.*<sup>31</sup> In addition, ischemic colitis may develop in patients with "collagen" diseases, especially rheumatoid arthritis,<sup>1, 6, 28</sup> apparently because of involvement of the mesenteric arterioles. In a significant number of patients, none of the above pathogenic mechanisms are

evident. These patients often have severe abdominal aortic atherosclerosis, and it has been postulated that atheromatous emboli may cause infarction of the bowel in some instances.<sup>32</sup> Ischemic colitis sometimes occurs following surgery on the abdominal aorta. Several mechanisms may be responsible, including atheromatous embolization, ligation or thrombotic occlusion of critical vessels such as the internal iliac arteries, the inferior mesenteric artery or the marginal artery of Drummond.<sup>13-17, 32</sup>

### TREATMENT

The first step in the treatment of ischemic colitis consists of making the diagnosis as quickly as possible. Patients with suggestive symptoms should be examined by barium enema and proctoscopy without delay. The barium enema should be done with care, since the degree of bowel necrosis is not always reflected by the appearance of the patient. Once the diagnosis has been established, the patient should be carefully followed until the acute phase of the disease has subsided. This is best done with serial plain roentgenograms of the abdomen. The interval between roentgenograms will depend upon the findings. For example, if long segments of the colon show extensive ulcerations and pseudopolyp formation early in the illness, then it is likely that ischemia is pronounced, and the patient should be watched closely for evidence of full thickness necrosis. This is signified radiographically by dilatation of a segment of gut which has shown recent evidence of ischemic damage,<sup>24</sup> and is an indication for immediate resection and/or exteriorization. If full thickness necrosis of the colon does not occur, then the process will heal with or without stricture formation. Fibrotic strictures may require resection at a later date.

During the acute phase of ischemic colitis it is important to pay attention to the general state of the patient. Any factor which might decrease mesenteric perfusion should be corrected, or better still, prevented. This includes, primarily, congestive heart failure, hypotension, shock, dehydration and electrolyte imbalance. Digitalis intoxication should be avoided since this entity has been impli-

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*Clarke Stout, M.D., a graduate of the University of Maryland School of Medicine, is now Assistant Professor of Pathology and Medicine at the University of Oklahoma Medical Center. Doctor Stout is a Fellow of the American Heart Association, a member of the American Association of Pathologists and Bacteriologists and the American Federation for Clinical Research.*



cated in ischemia of the intestine.<sup>33</sup> The use of sympathomimetic drugs should also be discouraged, because animal experiments have shown that prolonged sympathetic over-activity may cause blood to be shunted away from the intestinal mucosa.<sup>31</sup> The judicious use of plasma expanders would seem a logical way to increase mesenteric perfusion. Unfortunately, information concerning the behavior of the mesenteric circulation in human beings is limited, and experiments in animals are difficult to interpret because of marked species differences.<sup>34</sup> □

ACKNOWLEDGMENT

The helpful suggestions of Doctor G. Victor Rohrer are gratefully acknowledged.

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# Rapid Implementation of a New Vaccine on a Statewide Level

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*Rubella live virus vaccine was licensed in the United States in June, 1969. By March 1, 1970, 52 percent of the children in Oklahoma, ages one to eleven, had been immunized. This rapid statewide implementation of a new vaccine was accomplished through a unique relationship and cooperation of the Oklahoma State Medical Association, official and voluntary agencies.*

ON JUNE 9, 1969, rubella live virus vaccine was licensed for use in the United States. By March 1, 1970, 257,227 (52 percent) of the 495,239 Oklahoma children, ages one through eleven, had been immunized against rubella.

Oklahoma, like the remainder of the United States, had experienced a major outbreak of rubella during 1964. The exact number of "rubella syndrome" babies in Oklahoma as a result of this epidemic is not known. A review of clinical records of the major hospitals in Oklahoma indicates there were 27 children diagnosed as having "rubella syndrome" secondary to the 1964 epidemic. In addition, another retrospective hospital sur-

vey for the years 1955 through 1969 revealed that 23 rubella babies were born during inter-epidemic years. A total of 50 "rubella syndrome" babies were diagnosed from 1955 through 1969 in Oklahoma.

Eventually, most of these children received in-patient care or out-patient services at Children's Memorial Hospital in Oklahoma City, Oklahoma. Thirty-seven "rubella syndrome" children still receive care at this hospital.

Studies have indicated that rubella comes in epidemic waves with periods of increased incidence occurring at six to nine year intervals.<sup>1</sup> Epidemiologists had speculated that a major epidemic of rubella could occur as early as the spring of 1970.<sup>2</sup> If the potential epidemic was to be thwarted, rapid utilization of the new vaccine was necessary.

## STATE AND LOCAL HEALTH DEPARTMENT ACTIVITY

Limited funds for the control of rubella were appropriated to the Oklahoma State Health Department through the categorical project-grant mechanism from the National Communicable Disease Center, Atlanta, Georgia on July 1, 1969. This grant provided funds for program personnel and vaccine in limited quantity for a rubella immunization program.

Since the vaccine was limited, it was necessary to set priorities for vaccine utilization. It was decided (1) not to release the vaccine for routine use in the state's 60



county health units, (2) to concentrate our initial efforts in the lower socio-economic areas of the state, (3) that the county would be our lowest geographical subdivision. This meant that once the campaign was started in an area, the county would be completed before leaving, (4) that the vaccine would be offered to all children between the ages of one through eleven. Although studies of rubella infection rates suggest that children in the five to fourteen age groups are largely responsible for the spread of rubella,<sup>3</sup> the manufacturers' recommendations for vaccine use and the practical aspects of community relations made it necessary to expand the primary target group.

Our primary purpose for this action was to create "safe areas" in the state. This meant using a school by school approach in each county with parents being invited to bring preschoolers to the school clinics.

It was felt that by using this method we could reach a high enough percentage of the target population to prevent rubella outbreaks until the vaccine became more plentiful and was available for routine health department immunization clinics.

Between September 15, 1969 and January 22, 1970, the Oklahoma State Health Department in cooperation with local public health units immunized 34,989 children, ages one through eleven, in 20 counties. (Table 1)

THE ROLE OF THE OKLAHOMA  
STATE MEDICAL ASSOCIATION

For the past five years, the Oklahoma State Medical Association has maintained a Committee on Immunization. This committee has a membership of five practicing physicians and one physician from the Oklahoma State Health Department. The committee's function in the past has been to review rec-

ommended immunization schedules and to provide a general guide for good immunization practices for Oklahoma physicians. The committee has also been active in supporting legislation and appropriations in regard to immunization programs.

The committee meets on an *ad hoc* basis, but the chairman of the committee is kept fully informed of the State Health Department efforts expended in the rubella immunization program.

A meeting of the committee was held in October 1969. Although rubella was not on the agenda, toward the end of the meeting the chairman said, "What are we going to do about the rubella problem in Oklahoma?" We were on our way.

The chairman outlined the State Health Department's current accomplishments. Although the State Health Department's county by county and school by school method was effective, it was definitely too slow to prevent the possible epidemic in the spring of 1970, so an alternative appeared to be a one-day massive statewide rubella immunization campaign.

An executive committee to "Rub Out Rubella" in Oklahoma was formed. The initial membership of the committee included the Chairman of the Oklahoma State Medical Association Immunization Committee, the Associate Director of the Oklahoma State Medical Association, the Chief of Personal Health Services, Oklahoma Health Department, the Coordinator of the Immunization Program, Oklahoma State Health Department, a member of the Oklahoma Pharmaceutical Association, the Executive Director of the State Nursing Association, and the President of the Oklahoma Jaycees.

From this membership a rudimentary division of labor evolved. The State Jaycees

RUBELLA IMMUNIZATIONS GIVEN BY THE OKLAHOMA STATE HEALTH DEPARTMENT  
September 15, 1969 Through January 22, 1970

County	Number of Children Age 1-5	Number of Children Immunized Age 1-5	Per- cent	Number of Children Age 6-11	Number of Children Immunized Age 6-11	Per- cent	Number of Children Age 1-11	Number of Children Immunized Age 1-11	Total Percent Immunized
Total 20 Oklahoma Counties	27,035	7,535	28%	43,211	27,454	64%	70,246	34,989	49%

Table 1



committed themselves to raising \$150,000 to underwrite partial cost of the vaccine. The Associate Executive Director of the Oklahoma State Medical Association began to poll the County Medical Societies to determine the number willing to participate. The Immunization Program staff, Oklahoma State Health Department, was given the responsibility for logistics and communications, plus the determination of the local health department's role in the implementation of the overall program. The State Pharmaceutical Association agreed to handle the distribution of the vaccine. The State Nursing Association assumed the responsibility for recruiting nurses for the program.

It would be misleading to imply that these initial efforts were met with overwhelming optimism. Many members of the medical community felt the vaccine was still too new for mass utilization.

The primary concern was the theoretical possibility of rubella transmission from an immunized child to a susceptible pregnant woman. Once this question had been resolved, the program gained greater acceptance.

Persons representing the communications field had doubts that we could convince parents of the necessity of having their children immunized so that unborn babies would be protected. They were also skeptical about whether the public would be willing to contribute enough money to cover the vaccine cost.

Considering the first judgment, they were incorrect; reflecting on the latter, unfortunately, they were right.

#### FINANCING

An overwhelming initial concern was financing. Although the State Jaycees Organization had agreed to partially underwrite the cost, it was going to take time to raise \$150,000. Since the incidence of rubella begins to rise in winter with the peak occurring in early spring,<sup>4</sup> time was an unavailable commodity.

It was felt that the campaign had to be conducted during the first two months of 1970 or it would be too late. Sunday, Feb-

ruary 1, 1970 was finally agreed upon as the day we would "Rub Out Rubella" in Oklahoma.

It was decided that the vaccine would be offered on a contribution basis. We would ask for a \$2.00 donation for each immunization given; however, it was emphasized repeatedly that all parents should bring their children regardless of their ability to contribute.

During the first few months of our planning sessions only one manufacturer was licensed to sell rubella vaccine. The cost at

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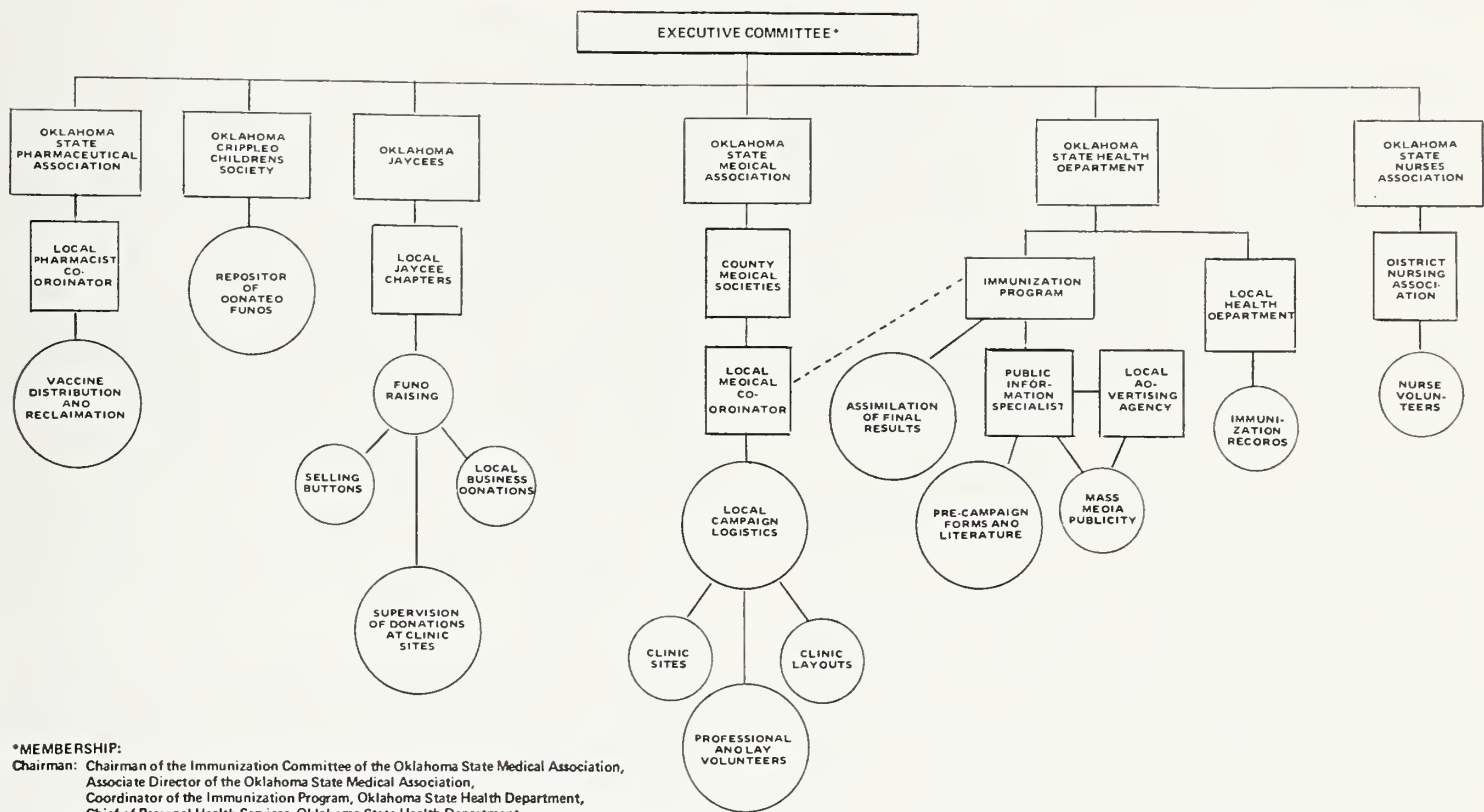
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ORGANIZATIONAL CHART FOR THE "RUB OUT RUBELLA" CAMPAIGN



\*MEMBERSHIP:

Chairman: Chairman of the Immunization Committee of the Oklahoma State Medical Association, Associate Director of the Oklahoma State Medical Association, Coordinator of the Immunization Program, Oklahoma State Health Department, Chief of Personal Health Services, Oklahoma State Health Department, President of the Oklahoma State Pharmaceutical Association, Executive Director of the Oklahoma State Nursing Association, President of the Oklahoma Jaycees.

Squares denote participating Organizations  
Circles denote Activities and Responsibilities

Chart 1

that time for single dose vaccine was still approximately \$2.00 per dose. However, in December 1969, a second manufacturer was licensed and the price per dose dropped considerably.

We still faced the problem of buying a tremendous amount of vaccine without funds. It is a tribute to one of the pharmaceutical companies that their officials were willing to sell the vaccine to the "Rub Out Rubella" committee on faith alone.

An agreement was reached to purchase 200,000 single dose vials of rubella virus vaccine at \$1.40 per dose. Multi-dose vials were ruled out for a simple reason. They were not available.

### ORGANIZATION

Once it was determined that we are able to obtain the vaccine the organizational process began. (Chart 1) The Oklahoma State Medical Association sent letters to each County Medical Society. The association requested two responses from each society; physician support and participation in the "Rubella Sunday" program, and designation of a medical coordinator for each county. The response was slow, but eventually 67 of the 77 Oklahoma counties agreed to participate in the "Rubella Sunday" program.

Once the medical coordinator was named for each county, a staff member of the Immunization Program, Oklahoma State Health Department worked with each medical coordinator to resolve the following organizational and logistical problems: (1) selection of clinic sites, (2) recruitment of professional and lay volunteers, (3) actual clinic layouts, (4) dissemination of pre-registration forms, background information material on rubella, etc., and (5) utilization of publicity and promotional material.

The Oklahoma Pharmaceutical Association also named a coordinating pharmacist for each county. The local pharmacist was responsible for storing the vaccine, distributing the vaccine to the clinic sites on "Rubella Sunday," supervising the restoration, and for returning unused vaccine to the central depot in Oklahoma City, Oklahoma.

The Oklahoma State Health Department printed the following materials: (1) 450,000 pre-registration forms, (2) 300,000 question and answer forms on rubella, (3) 250,000 informational slips to be given to the parents after their children had received the vaccine, and (4) 250,000 personal immunization record cards.

Previous experience with similar massive immunization campaigns indicated two areas



that deserved special attention. The need to maintain a permanent record, preferably at the local health department was recognized so provisions were made for the local health departments to transfer the data to their records. Also the parents needed a permanent record, so they were given a record for each child immunized. The card is general purpose and can be used to record all recommended immunizations.

PUBLIC INFORMATION ACTIVITIES

A local advertising agency contributed the services of two key employees to the “Rubella Sunday” campaign. They were able to open many doors for all-out publicity efforts; however, the majority of the planning and implementation of this phase was handled by the public information specialist of the Immunization Program, Oklahoma State Health Department.

Practically every type of educational and promotional effort was utilized: Television and radio, the press, outdoor advertising, person to person, the churches, etc. Most of these procedures are quite customary and have been utilized in other campaigns; however, our approach was somewhat different. Practically all publicity was withheld until two weeks prior to the campaign. During the two weeks preceding “Rubella Sunday” the mass media cooperated beautifully. The continuous publicity reached the point of saturation.

In analyzing the publicity effort, we feel we benefited most from the following factors:

1. The distribution of approximately 300,000 pre-registration forms and question-and-answer sheets through the 1,200 elementary schools in the state the week before the campaign. (Figure 1)
2. A poignant and moving thirty-minute television documentary on the “Rubella Syndrome Children” receiving care at Children’s Memorial Hospital in Oklahoma City, Oklahoma. The film was made by a local television station and was shown at least four times during the two weeks preceding the campaign.

Figure 1  
RUBELLA IMMUNIZATION REGISTRATION FORM  
Dear Parents:

Your State and Local Medical and Osteopathic Associations in cooperation with the JAYCEES and other organizations are sponsoring a countywide “RUBELLA SUNDAY” immunization campaign for children, age ONE through ELEVEN, on SUNDAY, FEBRUARY 1, 1970, FROM 12 NOON UNTIL 6 P.M.

**PLEASE COMPLETE THIS FORM FOR EACH CHILD AND BRING IT WITH YOU WHEN YOU COME TO THE CLINIC. SELECTED SCHOOLS WILL BE USED FOR THE CLINIC SITES. PLEASE CHECK YOUR LOCAL PAPER OR THE COUNTY HEALTH DEPARTMENT FOR CLINIC LOCATIONS.**

NOTE: Rubella, also known as 3-day measles and the 7-day red hard measles are NOT the same disease. If your child is protected against 7-day measles, he still needs an immunization against rubella.

SINCE MANY RASH-PRODUCING DISEASES ARE OFTEN MISTAKEN FOR RUBELLA, WE RECOMMEND THAT YOU ALLOW YOUR CHILD TO TAKE THE VACCINE EVEN THOUGH YOU THINK HE HAS HAD THE DISEASE.

Child’s Name\_\_\_\_\_ Birthdate\_\_\_\_\_  
School\_\_\_\_\_ Age\_\_\_\_\_  
I want my child to have the vaccine.

Signature of Parent

A CONTRIBUTION TO HELP PAY FOR THE VACCINE WILL BE GRATEFULLY ACCEPTED.

NOTE: Contraindications to the vaccine was deliberately omitted from the pre-registration form. This was done to eliminate confusion and misunderstanding. Each parent was questioned carefully at the clinic site by a physician or nurse.

3. The response from small city and rural weekly newspapers gave the campaign considerable impetus. Many of the newspapers ran the “rubella story” on the front page at least twice before the campaign.
  4. A publicity coordinator who was able to spend all of her time promoting the campaign.
- “Lady Luck” also played a role. Two weeks before the campaign, a small explosive outbreak of rubella occurred in two rural counties in the state. More than 100 cases were reported and the threat of a widespread rubella epidemic was magnified.
- Also, the Assistant Commissioner of Health for the Oklahoma State Health Department contracted rubella. The publicity on this rather humorous incident was extensive.



Figure 2

"RUB-OUT RUBELLA CAMPAIGN"

On the afternoon of Sunday, February 1, 1970, a clinic will be held in your neighborhood where children can receive Rubella (3-day measles) vaccine.

TAKE YOUR CHILDREN WHO ARE 1 YEAR THROUGH 11 YEARS OF AGE. GIVE THIS CARD TO THE REGISTRAR AT THE CLINIC AS PAYMENT FOR THESE INJECTIONS WILL BE MADE BY THE DEPARTMENT OF PUBLIC WELFARE.

Watch for local publicity as to the address where the clinic will be held or contact your local welfare office. TO REGISTRAR:

Please indicate number of children in this family who received injections.....and sign.....

COOPERATION OF OTHER  
OFFICIAL AGENCIES

The campaign's financial problems were partially solved when the Oklahoma Department of Public Welfare agreed to underwrite the cost of the vaccine for all children carried on the welfare rolls. Every parent receiving Aid to Dependent Children assistance, foster parents of welfare children and others received a card through the mail from the Oklahoma Department of Public Welfare. (Figure 2) The card explained the "Rubella Sunday" program and urged the recipient to take the card to the clinic with them. The "Rub Out Rubella" committee received payment of \$1.40 for each child immunized. The Oklahoma Department of Public Welfare paid for the cost of the vaccine for 10,421 children throughout the state.

The Office of Economic Opportunity, especially "Headstart" and other day care type centers, cooperated, and in some instances brought their children "en masse" to the clinic sites.

The three major military bases in the state conducted clinics at each base on "Rubella Sunday" and received very good responses.

RESULTS

On "Rubella Sunday," February 1, 1970, 207,251 children received rubella vaccine. Since that date, additional mop-up campaigns have been held in four counties.

Table 2 provides a county by county breakdown of the current rubella immunization levels in Oklahoma. As can be seen, as of March 1, 1970, we have immunized 257,227 children or approximately 52 percent of the

primary target population (ages one through eleven) in 76 of the 77 Oklahoma counties. The percent immunized by county ranged from a high of 85 percent to a low of 17 percent. Twenty-eight of the 77 counties now have rubella immunity levels of 60 percent or higher as a result of the immunization effort.

The "Rubella Sunday" campaign is over. The remainder of the control effort will be carried on by physicians in private practice, and the state and local health departments.

Plans designed to control and eventually eradicate rubella in Oklahoma are as follows:

1. Conduct make-up campaigns in those counties that have rubella immunity levels less than sixty percent.

2. Provide rubella vaccine for routine immunization clinics in the 60 county health departments as soon as adequate vaccine is available.

3. Continue the rubella surveillance system through the public schools and through the communicable disease reporting system of private physicians.

4. Maintain a stockpile of vaccine available for epidemic control measures. When an outbreak of rubella is discovered, children in surrounding communities will be immunized to stop the spread.

5. Maintain the statewide "rubella syndrome" register.

6. Continue active surveillance of maternal rubella through physician reporting and by periodically reviewing the results of rubella serology done at participating clinical laboratories.

7. Continue the ongoing public information and education program to include rubella and other diseases preventable by immunization.

SUMMARY AND CONCLUSION

Within nine months after the licensure of live rubella virus vaccine, 52 percent of the Oklahoma children, ages one through eleven, had received the vaccine, most of which was given during a statewide rubella immunization campaign on February 1, 1970.

The key word for the success of the rubella immunization effort in Oklahoma has



RUBELLA IMMUNIZATION STATUS  
STATE OF OKLAHOMA  
MARCH 1, 1970

TABLE 2

COUNTY	Number of Children Age 1-5	Number of Children Immunized Age 1-5	Percent	Number of Children Age 6-11	Number of Children Immunized Age 6-11	Percent	Number of Children Age 1-11	Number of Children Immunized Age 1-11	Percent
Roger Mills	179	141	79%	277	246	89%	456	387	85%
Ellis	314	193	61%	477	471	99%	791	664	84%
Pottawatomie*	2811	1625	58%	4842	4735	98%	7653	6360	83%
Woods	735	617	84%	1133	901	80%	1868	1518	81%
Murray*	665	429	65%	1205	1046	87%	1870	1475	79%
Woodward*	1117	720	64%	1972	1674	85%	3089	2394	78%
Seminole*	1852	1181	64%	3049	2634	86%	4901	3815	78%
Beaver	467	224	48%	719	693	96%	1186	917	77%
Greer*	401	253	63%	650	556	86%	1051	809	77%
Johnston*	542	309	57%	995	831	84%	1537	1140	74%
Grant	443	252	57%	611	513	84%	1054	765	73%
Kiowa*	911	462	51%	1465	1283	88%	2376	1745	73%
Alfalfa	468	251	54%	577	499	86%	1045	750	72%
Garfield	4544	2942	65%	6111	4464	73%	10,655	7406	70%
Harmon*	327	210	64%	598	424	71%	925	634	69%
Carter*	2845	1369	48%	4636	3724	80%	7481	5093	68%
Logan	1137	806	71%	1909	1232	65%	3046	2038	67%
McCurtain*	2296	1152	50%	3831	2867	75%	6127	4019	66%
Jackson*	3193	1448	45%	4348	3469	80%	7541	4917	65%
Noble	780	448	57%	1087	768	71%	1867	1216	65%
Bryan*	1589	852	54%	2546	1815	71%	4135	2667	64%
Muskogee*	4775	1776	37%	7390	6015	81%	12,165	7791	64%
Canadian	2454	1472	60%	3927	2541	65%	6381	4013	63%
Garvin	1643	891	54%	2753	1895	69%	4396	2786	63%
Custer	1280	933	73%	2401	1380	57%	3681	2313	63%
Kingfisher	1219	721	59%	1578	967	61%	2797	1688	60%
Okfuskee	863	544	63%	1399	818	58%	2262	1362	60%
Nowata*	701	355	51%	1151	749	65%	1852	1104	60%
Lincoln	1387	793	57%	2243	1343	60%	3630	2136	59%
Haskell*	596	295	49%	1116	686	61%	1712	981	57%
Atoka*	692	299	43%	1157	744	64%	1849	1043	56%
Blaine	936	523	56%	1409	780	55%	2345	1303	56%
Hughes	830	501	60%	1297	695	54%	2127	1196	56%
Jefferson	374	280	75%	725	331	46%	1099	611	56%
Washington*	3490	1373	39%	5023	3304	66%	8513	4677	55%
Choctaw*	1125	381	34%	1791	1198	67%	2916	1579	54%
Stephens	2572	986	38%	4012	2547	63%	6584	3533	54%
Tulsa	33,591	17,461	52%	48,074	26,272	55%	81,665	43,733	54%
Oklahoma	42,651	22,434	53%	63,675	34,561	54%	106,326	56,995	54%
Marshall*	437	150	34%	884	560	63%	1321	710	54%
Kay	3682	1613	44%	5097	2949	58%	8779	4562	52%
Latimer*	562	232	41%	831	487	59%	1393	719	52%
Creek*	3518	1007	29%	5612	3647	65%	9130	4654	51%
Delaware	1176	631	54%	2098	1014	48%	3274	1645	50%
Grady	2159	1090	50%	3418	1710	50%	5577	2800	50%
Pontotoc	1822	908	42%	2999	1512	41%	4821	2420	50%
Cleveland	6603	3140	48%	10,161	5147	51%	16,764	8287	49%
McClain	973	417	43%	1701	838	49%	2674	1255	47%
Coal*	313	70	22%	633	369	58%	946	439	46%
McIntosh	820	409	50%	1374	597	43%	2194	1006	46%
Love*	408	96	24%	639	372	58%	1047	468	45%
Tillman	1026	319	31%	1579	861	55%	2605	1180	45%
Okmulgee	2553	1145	45%	3759	1654	44%	6312	2799	44%
Osage	1802	613	34%	1866	969	52%	3668	1582	43%
Craig	946	423	45%	1613	644	40%	2559	1067	42%
LeFlore	2503	1079	43%	3947	1633	41%	6450	2712	42%
Ottawa	1964	606	31%	3225	1539	48%	5189	2145	41%
Caddo	2300	1023	44%	3791	1346	35%	6091	2369	39%
Mayes	1492	594	40%	2639	1024	39%	4131	1618	39%
Rogers	2210	1035	47%	3961	1307	33%	6171	2342	38%
Cherokee	1429	601	42%	2485	903	36%	3914	1504	38%
Major	518	176	34%	821	315	38%	1339	491	37%
Payne	3143	1065	34%	3949	1566	38%	7092	2631	37%
Pittsburg	2752	932	34%	4257	1607	38%	7009	2539	36%
Pushmataha*	750	129	17%	1194	577	48%	1944	706	36%
Beckham	930	328	35%	1621	550	34%	2551	878	34%
Texas	1116	343	31%	2087	713	34%	3203	1056	33%
Wagoner	1160	391	34%	1950	609	31%	3110	1000	32%
Adair	1193	390	33%	2153	626	29%	3351	1016	30%
Pawnee	669	199	30%	1096	301	27%	1765	500	28%
Comanche	10,151	2268	22%	12,914	3865	30%	23,065	6133	27%
Dewey	415	108	26%	643	174	27%	1058	282	27%
Harper	402	125	31%	628	125	20%	1030	250	24%
Washita	1358	260	19%	1881	440	23%	3239	700	22%
Cotton	448	84	19%	715	164	23%	1163	248	21%
Sequoyah	2055	436	21%	3410	505	15%	5465	941	17%
Cimarron	386	Refused to Participate		505	-----	-----	891	-----	-----
STATE TOTAL	196,939	92,337	47%	298,300	164,890	55%	495,239	257,227	52%

\* School by School Rubella Immunization Program held before or after "Rubella Sunday" February 1, 1970  
The 1-5 population estimate is based on the pre-school census June 1967 (Oklahoma State Department of Education.)  
The 6-11 population estimate is based on the School Census, October 1969 (Oklahoma State Department of Education.)



to be "cooperation" — cooperation between private medicine and public health, cooperation of numerous volunteer organizations, cooperation of the news media, and especially, the cooperation of more than one thousand volunteers who played a vital role in the "Rubella Sunday" clinic operations.

The real key to the success of this effort, however, rests with the concerned parents of Oklahoma. Their impressive response goes a long way toward the eradication of epidemic rubella in Oklahoma and should be most encouraging to potential programs in other states. □

ACKNOWLEDGEMENT

The authors wish to express their gratitude to Mr. David Bickham, Oklahoma State Medical Association, Doctor Richard Burke, Miss Barbara Embree, Mrs. Johnnye Rushing, Mr. Ronald Toth, Mr. Jay Smith, and Mr. Joe Gross, Oklahoma State Health Department for their immeasurable contributions in coordinating the local county activities for the "Rubella Sunday" campaign.

Highlighting the endeavors of the Oklahoma State Medical Association and the Oklahoma State Health Department was a congratulatory letter from President Nixon who said, "... you set an inspiring example for all your fellow citizens—and one that I hope will be widely followed and successfully imitated."

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- Surgery**—Isao Hirata, Jr., M.D., New Haven, Connecticut
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1. PATIENT'S NAME

2. ADDRESS

4. DIAGNOSIS (EXPLAIN COMPLICATIONS)

5. ADDITIONAL DIAGNOSES (CHRONIC DISEASE OF DEFECT FOUND DURING PRE

6. DATE OF ONSET

7. DATE FIRST CONSULTED

8. DUE TO PREGNANCY

☐ YES

☐

11. SURGICAL OR OBSTETRICAL PROCEDURES (DESCRIBE)

12. IF HOSPITALIZED, NAME AND ADDRESS OF

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COMPLETE IF PATIENT

16. TOTAL DISAP

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## *The Old-Timers' Luncheon of 1956*

R. Q. GOODWIN, M.D.

*Edited by*  
R. PALMER HOWARD, M.D.

*The excitement of the frontier in Indian Territory and of the '89 Run into Oklahoma inspired the pioneer physicians who swapped yarns at the Oldtimers' Luncheon.*

### INTRODUCTION

TO CELEBRATE the fiftieth anniversary of the union of the medical associations of the Oklahoma and Indian Territories a lunch meeting was held on May 7, 1956, at the Skirvin Hotel in Oklahoma City. The president of the Oklahoma State Medical Association, Doctor R. Q. Goodwin, planned and acted as master of ceremonies at the meeting, while the other officers and many councilors were also present.

Seventeen physicians and surgeons from the 1906 associations returned in 1956. Fifteen of them contributed anecdotal recollections to their fellows and younger associates

during the two hour session. Clearly this was an enjoyable and memorable occasion.<sup>1</sup> Sketches of the lighter side of practice and some of the medical emergencies confronted by the pioneer physicians refresh their successors in this wonder-drug and jet-plane age.

*Doctor R. Q. Goodwin, Oklahoma City:* "Gentlemen and co-workers, I am R. Q. Goodwin, President of the State Medical Association. I want to introduce the new president, Doctor H. M. McClure, of Chickasha. The State Medical Association, of which I am president, is one of the greatest in the nation; not because I have served a year, but because of the work that you men did, fifty, forty-nine, forty-eight years ago. That is just as true as the Bible. That is why we have a great state organization today, because of your foundation work. We would like today to have each one of you stand, give your name, and tell a short event of your early days of practice of medicine in Oklahoma. We have all the time we need. We have all afternoon if you want to spend it that way, and we would like for you individually to give us a brief story of some important event. I attended the Past-President's Breakfast this morning, and some incidents were told that I think should be brought out here today. I want those men who told those events to bring them out. I



## Luncheon / GOODWIN

think we should start with Doctor Lain at the table down here. Doctor Lain—”

*Doctor Everett S. Lain, Oklahoma City:* “Mr. President and Gentlemen, I don’t know why you want to hear from me unless it’s because I have more gab and less brains than any of the rest of them here. What was the incident particularly you wanted? You get old-timers here started and you won’t have to turn on your stomach, for we’ll be here until tomorrow morning. Better be more specific than that.”

*Doctor Goodwin:* “Would you tell us, Doctor Lain, of your first meeting of the State Medical Association, briefly?”

*Doctor Lain:* “Yes, sir. I went to Weatherford in August, 1902. I had practiced two years prior to that. In April, 1903, I heard of an Oklahoma Territorial meeting, I think, in Oklahoma City. I put up at the old Lee Hotel [later Huckins]. I got in a little late, Choctaw train, and they told me there were no beds here. They said you’d have to sleep with somebody else. She said, ‘There’s a doctor’s convention on here, did you know it?’ I said, ‘Yes, that’s what I’m here for.’ ‘All right.’ I went up and went to bed. After a little bit, Doctor Lewis J. Moorman came in, crawled into bed. We introduced ourselves. I had two dollars and a half in my purse and I stuck it under my pillow. He was from Nash [southwestern Grant County, a town near Jet, where Doctor Moorman had his chief office], and I was from Weatherford, both young greenhorns. Next morning we became better acquainted and so we became very fast friends thereafter. I never had the nerve to tell Moorman about that until years afterwards. When I told it, he never finished telling that as long as he lived, about me being afraid to risk him with only two dollars and a half in my purse!

“I was here at the union of the two meetings [associations], I very well remember. Within the organization I had organized Custer County prior to that time; I got the credit for it, the first medical society southwest of Enid. I was a delegate to that meeting, the joint meeting here. They had a ‘wedding ceremony’—LeRoy Long and Fortner [Benjamin F. Fortner, Vinita], I guess—

anyway, Fortner was elected as president. We had a ‘wedding ceremony’ and a banquet that night. C. S. Bobo [Norman] presided with a big white shirt and his carnation on. I have that picture. I was here then and there was a discussion over the medical journals, and things got pretty warm then. I understand your House of Delegates is very tame now. I was present at that meeting, no, at one or two after that, when the fight I heard Carl [Puckett] talking about there. I happened to be bumped against during the fight between the two editors who wanted to establish their journals here. Well, that’s enough. I am happy that the good Father has considered it wise to let me live this long. But the happiest event is to meet these dear old fellows that were here at the same time as me, and may we have many more years together.”

*Doctor Goodwin:* “We’re just going to skip around. I’d like for Doctor Cook to talk.”

*Doctor W. Albert Cook, Tulsa:* “It’s a great pleasure to be here. The original meeting of the uniting of the two territorial societies is very vivid in my mind. I remember I came over on the morning train. I went up to the Threadgill Hotel [north of the Skirvin, southwest corner 2nd and Broadway], which was just up the street two or three blocks. I hadn’t any more than got in than there was a dapper young man with a sailor hat on. He came up to me and he started to pin something on me. I said, ‘Well, what in the hell are you doin’?’ He said, ‘I’m pinning a McAlester badge on you. We want the next meeting at McAlester.’ I said, ‘Well, you nor no other s.o.b. can pin a badge on me!’ We squared around. We were just going to have a little free-for-all. Then Ross Grosshart, probably many of you don’t remember him—he was a surgeon over at Tulsa—he stepped in between us and there was no bloodshed; so everything was harmonious and this guy and I are still on speaking terms.”

*Doctor Goodwin:* “Doctor Baker of Enid —”

*Doctor Roscoe Baker:* “I didn’t attend the meeting in 1906 but I think I made it in ’07 or ’08, I forget which. I was living at Granite at the time and didn’t know one hotel



from another in Oklahoma City but I heard from some of the people from Granite to stop at the Grand Avenue Hotel [Grand Avenue, opposite Colcord Building]. I didn't know. I reached a little walk-up hotel east from the railroad a little ways. I got to bed that night—I didn't get to go to bed, rather, somebody rapped on the door. A man said, 'Do you need anything to drink, mister?' I said, 'No, I don't want anything to drink.' So pretty soon here came a person, a flowsie-headed female, and rapped on the door (I'm gonna disappoint you!)—she says, 'Oh, I believe I've made a mistake!' I said, 'I know damn well you did!' So I slammed the door and in just a minute there was a man rapped on the door. I opened the door and he said, 'Do you want a drink, mister?' I said, 'No, I don't want anything to drink and I don't want anything else! Unless you tell the rest of these whores and bootleggers to stay away from my door, the next man who raps at my door, I'm gonna shoot right about six inches below the knob!' I had a 32.20 Colt laying on the table there that I'd gotten over at Granite from a fellow that had got his head beat up, and I got the pistol for taking care of him. He says, 'Where are you from, mister?' and I said, 'I'm from Texas,' and he said, 'OK!'

*Doctor Goodwin:* "Doctor Willour and Doctor Cook, come over here just a moment, please; they want you over here in the corner. Doctor Howard—"

*Doctor R. M. Howard, Oklahoma City:* "Mr. President, it is a great pleasure for me to be here and see so many of the old-timers. I am an old-timer. I came here in 1901 after graduating from the University of Michigan. I came here in time to go over to El Reno and register for the Cheyenne and Arapaho Opening, and I drew a farm. Well, I was trying to get started practicing medicine in Oklahoma City. I couldn't go over there and live on it and prove up on it. So I sold my relinquishment to a man from Edmond for \$800, and it was the biggest \$800 I've ever seen. I assisted Doctor Rolater [J. B. Rolater] in his surgery—he was one of the principal surgeons here at that time—for about three or four years, and then I went into practice for myself. I practiced general practice of medicine, at times major surgery, but it was not for a number of years did I give

up my general practice and went into surgery entirely. I continued to practice that until 1947 when I retired. My relationship with the doctors here in town and over the state was good. Fortunately the doctors here always got along all right as they still do. I did enjoy my years of association with them and with the men from over the state, many of them I see here today. Thank you."

*Doctor Goodwin:* "Doctor Sam McKeel of Ada—"

*Doctor Sam A. McKeel:* "Doctor Goodwin, gentlemen. I hesitate to go back and tell you about my beginning. I was a school teacher before I decided to study medicine and I couldn't get money enough to go to medical college at the time. But finally I did get off to medical school. I didn't get to stay the whole year because I ran out of money. I came to the Cherokee Nation and opened up an office at Alton [possibly Hanson, where

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*Doctor Howard is a Fellow of the American College of Physicians, and a member of the American Historical Association, the Oral History Association, the Oklahoma Historical Society, and other medical and historical organizations.*



he was listed for 1906] to practice medicine, about eight miles northeast of Sallisaw. I didn't know any medicine much, but I started in March and by the middle of June I was riding day and night. I had to get a second horse. I had the first horse rode down. Nobody was ever surprised like I was to be in that kind of business. I had no idea of getting that much work. Well, I went back to school another year and came back and practiced in the same place, and went back to school again. Finally, I finished school and moved to Sallisaw.

"In 1905, think it was, it might have been in '06, W. T. Tilly called the doctors in the Cherokee Nation together at Pryor to form a medical association. Doctor J. B. Ferguson [Sallisaw] and I went up there. We went back home and organized what we called the Sequoyah Medical Society. It was in what is now Sequoyah County, and I was elected president and he was elected secretary. Next year I was elected secretary and he was elected president. That society held on until several years after I left there but it hasn't met now in a good while. The first time I ever met Doctor Willour [L. S. Willour, McAlester] and Pete Nesbitt [Doctor P. P. Nesbitt, Muskogee and Tulsa], they came over there to visit our society. That must have been in about 1908, or '09, or '10 or '11 or '12, somewhere. Willour might know when that was. We had a good society there for years.

"I can't tell you when the first meeting that I attended the State Association. I guess it's on account of my memory. I attended a meeting at the Huckins Hotel, I think. I attended one at Shawnee and I attended a medical meeting at Guthrie when Doctor Duke [John W. Duke, Guthrie] was in his heyday, but I don't know whether it was the State Association or what the heck it was. I know Doctor Reeder [Charles L.] was there from Tulsa. He was one of the leading men, and I had to make a run for the interurban, and I got his topcoat. It was kind of cool and I got off here in the city and I put his coat on and it seemed to fit me about a shade off. I phoned back over there to try to find out who had my coat. They told me that

Reeder had it and he was on the next bus. I met the bus and we exchanged coats. I guess some of you will remember Doctor Reeder, a very fine fellow from Tulsa, and I think he was president one year."

*Doctor Goodwin*: "Yes, he was. He was also Grand Master of the Masons. Gentlemen, I would like for you for the moment to face around the other way. The photographer is trying to pick out the best looking men from small groups. Will Doctor Willour, Doctor Baker and Doctor Cook report over to the corner, please."

*Unknown voice*: "We might be getting on the funny pages."

*Doctor Goodwin*: "Doctor Shi—"

*Doctor T. P. Shi, McGee*: "Doctor, I don't believe—"

*Another voice*: "Come on, Hugh."

*Doctor Shi* [probably *Doctor A. H. Shi*]: "Doctor, I don't feel like I can say anything."

*Doctor Goodwin*: "Doctor C. B. Taylor, Oklahoma City—"

*Doctor Taylor*: "Well, I'll make it short. I landed in Oklahoma County in 1906, Oklahoma City. I went as far as I could go east on the train and it cost thirty-five cents. I got off at a little town of Spencer out ten miles from here. I didn't start to practice until the next day, so it is nearly fifty years and one month ago that I started to practice here. I will say that I lived with Doctor Howard here in the same fraternity house. He was a senior when I was a freshman, so you can see he is older than I am, whether he looks it or not.

"When I started to practice out here I was full of the science of medicine. I didn't know anything about the art of medicine and always contend since, with a little experience, that there is a great deal to the art of medicine. The science of medicine you must know, but you have to learn the art of medicine. I'm just going to illustrate that and sit down. The first year I was here I delivered a baby for an Irish woman. I won't tell you her name. It was her ninth baby and I gave her a talk about that. She had had two or three sets of twins and a baby every year, and I told her she was going to kill herself if she didn't quit having babies. I didn't see her again for two years. Then she was in the main street of the little town and she



came up carrying a baby and leading a toddler. That was two since I had seen her. And I said, 'Mrs. O'Reilly, I told you you're going to kill yourself. You must stop having babies so close together.' 'Well,' she says, 'Doctor,' (Have you noticed how these country people shake hands?—The people were standing around, the country people, listening to what she said, and she had a high voice—when they shake hands like this and they don't let go?) and she says, 'Doc, I'll tell ya, out where we live, in the summer it's hot, and the mosquitos are bad and you can't sleep, and you've got to do something!'"

*Doctor Goodwin:* "Doctor Somerville—"

*Doctor O. S. Somerville, Bartlesville:* "I came to the Indian Territory in 1904 and I've been here ever since. I belonged to the Indian Territorial Medical Association before the merger. If I remember correctly it was a pretty warm meeting. I don't think there was any bloodshed but there was a good deal of talk. I graduated in 1894 from Louisville and wasn't very old at that time. I practiced medicine in West Virginia for ten years before I came out here in 1904, so I've been in Bartlesville for more than fifty years now. I had a position with the Phillips Petroleum Company for twenty-eight years and kind of lost touch with the general practitioners around there. About the time I got ready to renew them I retired, so I'm kind of out of touch with the medical profession of the state. I know Doctor Willour and Doctor Cook, Doctor Bollinger and many others here that have known me for many years. Doctor Puckett over here used to send us one hundred tuberculosis stamps to put on our letters. Now I see he has increased it up to three hundred! I have enjoyed this meeting very much and wouldn't have missed it for anything. I don't know if there will be any more meetings like this or not, but if there is I hope I live long enough to come to them."

*Doctor Goodwin:* "We do too, Doctor. I want to tell you something right here—that one of the greatest honors I have ever had in my life was just during the past year, when in Bartlesville I was permitted to pin a Fifty Year Pin on five men. That was one of them. Doctor Nesbitt—"

*Doctor P. P. Nesbitt, Tulsa:* "I don't know

that I have much to say. I just happened to think of when we organized the Indian Territorial Society. We didn't have any counties [branch societies] over there and we organized one at Muskogee and I was elected secretary. One thing that I recall was that down in Checotah, they had several physicians practicing down there. One of them the fellows kind of ganged up on, and they asked me to try to find out what I could about him. After a lot of correspondence back and forth—he had a certificate of graduation from the Western Reserve Medical School, which was, of course, a good school, but they all said he didn't know anything about medicine—we finally got the thing run down to where he had worked with a man who had graduated from the Western Reserve Medical Society [school], but had never practiced. He was a telegraph operator. This man, who had worked in the office with him had got his record, got his history, and had written to the Western Reserve and told them that he was this other man and had lost his diploma in a fire and asked them to send him another. They sent him a certificate of graduation and he came down here and registered on it and was practicing medicine on it. I contacted this man who was still working as a telegraph operator back in Pennsylvania. He wrote me that so far as he knew that he didn't know of anyone, he had never given his permission to his knowledge, but he rather suspected a man who had worked in his office with him some years before. Well, I don't know whether he contacted this man or not, but just before the authorities got ready to move in on this bird, why, he disappeared one night. They never saw him in that part of the country any more. He had tied up with a widow there. His wife and daughter stayed around there for several months and they disposed of all the property and then they disappeared. It was rumored that he had gone to Mexico and was practicing medicine down in Mexico. I don't know. That was just one of the incidents about some of the people who were practicing medicine in Indian Territory before Statehood."

*Doctor Goodwin:* "Thank you, Doctor Nesbitt. Doctor Lehew, I want you to talk."

*Doctor J. L. Lehew, Pawnee [later Guthrie]:* "I don't know that I have any ex-



periences different from other country doctors. I came into this state by way of Coffeyville, driving the horses — Pawhuska, Bartlesville, Pawhuska, into Pawnee County and settled at Pawnee in 1899. I have a little wife and three sons, two physicians and one dentist, to report. I am proud to be a member of this group of men and I thank you for the courtesy you have extended me to be here. Thank you."

*Doctor Goodwin*: "Thank you, Doctor Lebew. Doctor Willour—"

*Doctor L. S. Willour, McAlester*: "Well, I think you all know enough about my pedigree. I came in here, though, and I was very fortunate to become associated with one of the great men of medicine in old Indian Territory that probably very few, if any, of you knew or remember. That was Doctor E. N. Wright, the Indian Doctor. I was associated with him for eight or nine months. It was during that time that I attended the first meeting, the amalgamation meeting of the Oklahoma and Indian Territory here in Oklahoma City. It was my first time, of course, to attend a medical meeting in Indian Territory.

"Something rather funny happened a couple of years later after the organization, and I wonder if any of you remember. We had a Governor and he appointed a State Health Commissioner. He appointed a doctor by the name of Mahr [J. C. Mahr, Shawnee]. He was our first State Health Commissioner. He was a pretty smooth politician, so he figured with the appointment of a county health man in each county that he had a pretty good chance to get control of the Oklahoma State Medical Society. That made a pretty damn good organization, one man from each county that he had control of. It took some manipulating to undo that.

"E. O. Barker was secretary, lived up at Guthrie, and he was about the first man that we felt that we should dethrone. Barker was a very fine gentleman, however, but just for political purposes we thought he ought to be attended to, so we put up Claude Thompson [Muskogee] to run against him for secretary. There was a fellow by the name of Davenport [possibly A. E. Davenport, who

was listed in Tishomingo, 1906] that lived in Holdenville. He was red-hot for Thompson and he got in an argument down at the Threadgill Hotel with Barker, and they had an honest-to-god fist fight. They just had a knock-down-and-dragout. He knocked Barker down, and Barker showed up the next morning at the medical meeting with a beautiful black eye. Now that's just to show you how hot politics were in the Oklahoma State Medical Society to start with. But Doctor Mahr never did get control of the society after we got our feet on the ground. The doctors started to control it again, as usual. I want to tell you that it was very necessary that we do that very thing, because if we had let these State Health Commissioners like Carl [?] and Mahr and those fellows run this State Medical Society, we'd have been in a hell of a shape!

"Now then, I considered myself one of the old men coming here. After talking to these fellows I'm not in it. I'm just a young guy compared to the rest of them. However, I've been practicing medicine fifty-five years, Thursday, the 25th of May. I've gone through a broken hip, three broken ribs and pneumonia in the last year and a half, and had the prostate taken out. I think if a fellow can go through all that in about a year and a half and come out looking as well as I think I look now, I think I ought to make probably the first hundred and fifty years! Gentlemen, it's a pleasure to see all these old-timers and go around and shake hands with them, and I hope to be able to do it many times again."

*Doctor Goodwin*: "Thank you, Doctor Willour. Doctor Hahn—"

*Doctor L. A. Hahn, Guthrie*: "Mr. President, I was called upon to make a speech one time and I said to my neighbor, like Doctor Pierson [O. A. Pierson, Woodward], 'What do you say when you don't know anything to say?' He said, 'If you have nothing to say, say it!' I have been a member of this society since 1903 and I remember very well that fight of Barker's. I am from Guthrie and I knew Barker very well, because he was my regular anesthetist for a number of years.

"One of the outstanding things that happened to me was in 1909, the very night or



the next morning—it was the very night that he got the black eye—that they elected me a delegate to the national convention in Atlantic City. I was elected for that year and the year following, which was at St. Louis. Something happened there that was a little unusual. Buffalo was there with a big delegation to get the AMA to meet in Buffalo, and they had it all but one vote. I don't know if I was out shopping or something else, but I was a little late, and I walked in at the right time and the chairman said, 'We are voting for Buffalo or Los Angeles. Which will you have?' I said, 'Los Angeles.' I think the Buffalo crowd would have liked to boil me in oil because they had it all but that one vote.

"Some of the other things that happened to me—my friend Howard here, I tried to get him to write a paper when I had the honor of being chairman of the Surgical Section here one year. There are many little incidents but I don't think I ought to take very much time, but merely say that I'm mighty glad to be here with these old fellows. I feel like I'm back in the medical world. You know you go to a convention now and you're eighty-three years old and everybody says, 'Well, that old guy, he's a stranger here.' Really, I'm a stranger with this younger generation, but I'm not in this crowd. I know Everett Lain over there. He and I located about the same time. He could tell you a lot of stories about what happened about that time, but we will suffice it to say that I want to meet everyone and have the names of everyone. I hope this will be a permanent organization so we can tell the names. I don't care if we tell the ages, too. So that we know we at least will be friends until some of these days we will be kicking off like older people do."

*Doctor Goodwin:* "Thank you, Doctor. Doctor Williams—"

*Doctor J. C. Williams, Durant* [listed in Stroud, 1906]: "I don't know what to say about anything. All the speeches that I've heard are very fine. I remember one little thing that I had during the time at the Sac and Fox Agency. It was about 1909. Doctor Wyman [Frank W. Wyman] and I used to be the Sac and Fox Indian Agency doctors. I helped him out and we worked together

there because I was about to starve to death down there, trying to get a little money to live on. One day down on Deep Fork—I guess a great many of you know where Deep Fork is down below the Sac and Fox Agency about ten miles—I was called down there. One of the girls had typhoid fever and she had about eight or ten children. The flood came along and washed everything they had out. He had salvaged a little bit of corn and it rotted on him. So I said, 'What are you going to do with this corn?' And he said, 'Well, I've got some pigs out here and I'll feed them this corn and they'll get fat on it.' I said, 'Rotten corn?' 'Oh yes, sir, they'll get fat.' And he said, 'I've got four or five dogs, hound dogs. I'll let you have a hound dog and two pigs.' I said, 'Well, what would I do with those pigs?' I had a buggy and two ponies. 'Well,' he said, 'you take them home, get some corn, and fatten those hogs and then make some meat.' I went around and studied about that. Doctor Wyman had given me a lot of lectures about always collecting something when I went to see somebody. So I got to studying about what Doctor Wyman had told me to do.

"Along about that time had come a cyclone at the Sac and Fox Agency, and Doctor bought him about a twenty-five dollar Stetson hat and the cyclone knocked that hat off and scarred him up a little bit. He was mad about that cyclone and his hat. I didn't want him to be mad at anything else so I decided 'I believe I'll put two pigs in my buggy and get some corn and bring them home.' So I brought them back and my wife was so mad she like to died. Had a dog, I got a dog, too. She like to died, she was so mad at me. 'I know we haven't got any money now. You lost all you had when we came from Kentucky.' (I graduated from Louisville, Kentucky University.) So I came on back, and I sold those pigs for five dollars and give the hound away. That was about my experience. I've had many, many experiences. Doctor Wyman laughed, he just died laughing. He came from Iowa and left a tremendous practice up there. He said people wouldn't pay him and he said, 'I just came down here to get as far as I can from Iowa. They never pay up there and I just don't want to live among 'em.' I got my pigs and went away.



## Luncheon / GOODWIN

So that was just one of my many, many experiences I enjoyed.”

*Doctor Goodwin*: “Thank you, Doctor. Doctor Renegar—”

*Doctor James F. Renegar, Tuttle* [listed in Ardmore, 1906]: “Mr. President, fellow doctors. I’ve always been a little town doctor. I began practicing medicine at Wapanucka in Johnson County in 1902. They didn’t know anything about any board then. I never heard tell of anything about a board. In 1904 they originated a board at Muskogee. There was eight of us went before the board and four of them failed and four of them passed. I was one that passed. I went back home and went to work. I was just always a poor old boy and whenever I had work I worked my way through. In 1900, first I rode a horse day and night for three years. I’ll never forget that old Charlie. I rode some awful bad nights. I remember when one night about six or seven miles north and it was just sleeting like everything. Oh, that wind was coming and it was just coming so bad Charlie was going that way and I had to turn around this way. But he carried me there and I saw my patient—pneumonia. Coming back I made it all right.

“Well, I rode for three years then I bought me a secondhand buggy. You know there was no roads in Indian Territory in that day and time, to speak of. I’d drive in the daytime and I’d ride old Charlie at night. Well, after then I bought me a pair of sorrel ponies and a new buggy. I was going good then for a young fellow. I was getting along. So I went on and practiced there until 1906.

“The first confinement case that ever I had in Wapanucka was on a dirt floor and they didn’t have any clean cloths, or rags, we called them then. But that woman got along just as well as if she had been in a hospital. So that’s been about my medical career. I’ve been practicing now about fifty-three years. Doctor McClure, our incoming chairman, presented me with my Fifty Year Pin, I think, a little over two years ago, and I’m very thankful that we’ve got a man like Doctor McClure. He’s my friend.”

*Doctor Goodwin*: “Doctor White—”

*Doctor J. Hutchings White, Muskogee*: “I don’t know what I can add to what has already been said. I know these fellows get up and tell you how little medicine they knew at the time they started to practice. Why, I’ve wished ever since that I knew half as much medicine as I did the first year I practiced! I knew that I knew all about medicine, and I haven’t learned anything since! We used to come to these meetings. I attended the meeting in 1904 at McAlester where they arranged the amalgamation of these two societies. I got up and talked quite a lot, displayed my little knowledge. After we got out, old Doc Fite [F. B. Fite, Muskogee], the father of these boys, came up to me and he said to me, ‘Aren’t you talking quite a lot for a young man?’ I never forgot what he said then, so I’ve managed to keep my mouth shut a good deal since that time. We prepared for those meetings in a grand style. We always had two or three decks of cards and a bunch of poker chips, and we brought our whiskey over in gallon jugs. We always planned a good meeting and a good time.”

*Doctor Goodwin*: “Doctor Wolff—”

*Doctor L. G. Wolff, Okarche*: “It’s been quite a while since I practiced medicine. I graduated in 1899, Washington University in St. Louis. I’d like to tell of the first case I had when I got out to practice medicine. I was in practice in Okarche. I had been there three weeks and I wrote three prescriptions. Then one day I was walking along the street and a man came along and said, ‘Doctor, I’d like for you to go out with me. I’ve got a boy that’s been kicked by a horse and he needs some care and I wish you’d go out with me.’ My brother was practicing in Waukomis. He had just come on the noon train and we was together. So we went out to see this boy. The horse had kicked the boy in the forehead clear down from the hairline clear down to the eyebrow, and the brain tissue was exuding. The manure from the stable and the hay and everything was in that wound. So we got that boy dressed up. He was rather unconscious. He was in shock and we didn’t need an anesthetic. My brother and I dressed him up and he finally got along all right. In that one year I had five cases with fracture of the skull and none of them had any bad results. All got along



all right, and after that I didn't have any more trouble getting practice in medicine in Okarche. That's all."

*Doctor Goodwin*: "If that had been now, all of them had died, wouldn't they? That must have been the beginning of brain surgery in Oklahoma! Doctor Wharton—"

*Dr. Jesse L. Wharton, Depew* [listed in Duncan, 1906]: "If I make a speech here now that will be my first one. I'll admit I was a little bit inflated when I came in here because of my age and because of when I started practicing, but I found out since I've been here that one man graduated ten years before I did and there are two or three fellows here that are six or seven years older than I am. So I don't feel so blowed up like I did. I drove a little team of mules hitched to a covered wagon from Russellville [Alabama?, Arkansas?] over here where Duncan is. Duncan wasn't there and there wasn't any railroad there in 1889. We were twenty-three days; we drove pretty fast. Sometimes we were driving at a trot when we were going downhill. I must say if any of us were going anywhere now and it would take twenty-three days we would just call it off, and we wouldn't go.

"Now I heard about the men having their first cases of obstetrics. I remember my first case in 1897. It was a girl that I had been for two or three years, or longer maybe, going to dances with her, once or twice a week; not with her, but going to dances where she was. We would dance all night and she was well acquainted with me. My father was sick. I was studying under him; I studied pretty hard in his office. Most of that studying was filling capsules and wrapping up powders in papers, that was the most of the work that I was doing. But when they came after me, my father was sick and her husband said, 'Well, Jess, you go down there, you can do, you can help some.' 'Oh, I'm not going,' I says, 'I'm not going to do it!' Well, my mother says, 'You go on down there and help this girl. I'll go along with you.' 'All right,' I said. 'You go on down there.' When I went into the door she was having real hard labor pains. She told me to come into the living room. She says, 'Oh, Jess, honey, can't you do something for me?' Well, I helped a little, don't worry. I want

to say something else. I want to say, these men, they brag about being older than I am. But some of them are not quite as old, but they don't have any hair on their head, or what hair they do have is really white. Now that is not the sign of old age; that's something about their conscience!"

*Doctor Goodwin*: "Doctor Puckett—"

*Doctor Carl Puckett, Oklahoma City* [listed in Pryor Creek, 1906]: "Mr. President, I certainly enjoy being here. I got a list of all of the boys and I thought maybe it might help to send a letter and I got a few replies. One of my friends got a little bit mixed up in his dates; I straightened him out. I did appreciate a lot Doctor Lehew's letter, over there. He wrote it in longhand, just about as plain as anybody could write at all. He forgot one thing. He mentioned two sons that are doctors, but he has a grandson. I've been checking up on the interns and when I saw Lehew the Third, I knew who he belonged to, so that is one thing he overlooked.

"Sam McKeel mentioned about coming to Pryor. I landed in Pryor in 1905 on July 29th, drove in from Arkansas. I got into the AMA. I don't recall the machinery we used at that time, but in October, anyway, we decided among the doctors there it would be a fine thing. I don't recall what sort of an organization we had. It was the northern district; it was an area of eight or ten counties. Not having much to do, the youngest man, they made me the secretary. We had then, in Pryor, an organizational meeting and a program. We had a dinner at night and Sam McKeel was one of the young men that came from Sallisaw, Frank Wormington from Miami, and myself. Then that's three of us here in this group from one district.

"I lived there until I came to Oklahoma City in 1924, but maintained my legal residence there for something like thirty-eight to forty years. I've been a delegate to the State Medical Association from Mayes County. Thanks a lot. I'm mighty glad to be here."

*Doctor Goodwin*: "Have I overlooked anyone?"

*Doctor Baker* [probably Doctor Roscoe Baker, Enid]: "Doctor Goodwin, I think



## Luncheon / GOODWIN

you've got one of the best, the most versatile, story tellers in this group. You've overlooked him, that's Doctor George Ross. He is sitting right back there. But before that, let's mention Rufus Goodwin, who really got this group together, because I've enjoyed this thing so much. I think we old heads, old goats we'll call 'em, ought to give a vote of thanks!" (applause)

*Unidentified voice*: "Get Doctor Bollinger [I. W.] from Henryetta; he's an old pal."

*Doctor Goodwin*: "Doctor Bollinger, do you have anything to say? (no reply) Doctor Ross, do you want to respond to their demands?"

*Doctor George Ross, Enid*: "I'm happy to be a member of the Garfield County Medical Society, and in order to get them started off, I usually tell them a little story, but I didn't know that Baker was going to put me on the spot today. I used to have an old uncle I'm always telling them about. His name was Uncle Bertram. Uncle Bertram would have been a lot older than you fellows here today if he was still living. But we was hoeing corn one day, he and my brother and I, and Uncle Bertram said, 'Boys,' he said, 'you know I'm going with that girl in the neighborhood named Mandy Hatcher, and she's the sweetest thing there is in Tennessee. You know, I went down there last night and sat by her all evening and held her hand and she never even tried to move her hand out of mine.' He says, 'Lord, I'm goin' back.' So next day we was still hoein'. Uncle Bert was a good hoer. He claimed his mother had won a prize for being the best hoer there was. I mean hoeing corn. So he said, 'You know that I went down there and I saw Mandy last night,' and he said, 'She was really sweet. You know, I put my arm around her waist and I held it there all evening. She didn't even move.' And we just kept right on hoein' corn in that old slate field back in

Tennessee. Next day he came back and he said, 'You know, boys, I'm just gonna try to marry that girl.' He says, 'I went down there last night and she gets sweeter every night. I kissed her about half a dozen times and she didn't mind a bit.' My brother Layne is about four years older than me. He says, 'Well, Bertram, I believe if you go back to-night you ought to take your rubbers.' He says, 'Hell, no! If it's rainin' I ain't goin'!"

*Doctor Goodwin*: "Gentlemen, when this program was initiated, it was suggested that we honor you men by a luncheon, but we changed that around and asked that we be honored as a State Medical Association by your presence. We want to thank every one of you for coming here. I think this will be an annual event. I hope you are back next year. We have several councilors here today to represent you and I want them to stand and give you an applause of their own feelings for your presence, your experiences and your guidance in the years past, in setting the foundation for the medical association that we have today. Will the councilors give just what you feel? (applause) Doctor McClure, do you have anything to say?"

*Doctor H. M. McClure*: "No, thanks."

*Doctor Goodwin*: "We want to thank you gentlemen for being here. With that we shall adjourn. If you want to sit around and visit, that's fine. If anybody has anything to say, feel privileged to say it. We feel honored to have you here as our guests. Thank you." □

### ACKNOWLEDGEMENT

The chairman of the program at the Old-timers' Luncheon was Doctor Rufus Q. Goodwin, President of the Oklahoma State Medical Association. Doctor H. M. McClure, the incoming president, was present. The tape recording was made and preserved by James M. Babcock, M.A., Assistant Archivist, Division of Manuscripts, University of Oklahoma Library, Norman, Oklahoma. The typescript was prepared by Mrs. Erma McKee, History of Medicine Section, University of Oklahoma Medical Center.

1. Goodwin, R. Q.: Tribute to the Old Timers, *Journal of the Oklahoma State Medical Association*, 49: 208 (June), 1956.

### THIRD ANNUAL MYRTLE LAUGHLIN MEMORIAL LECTURESHIP IN HEMATOLOGY

William B. Castle, M.D., distinguished physician, Veterans Administration and Francis Weld Peabody Faculty Professor of Medicine, Emeritus, Harvard University, will present the lecture on "Pathophysiology of Vitamin B<sub>12</sub> Assimilation."

4:00 p.m.  
January 14th, 1971

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## Improved Life Insurance Program Offered

An improved group term life insurance program for OSMA members has been announced by the association's Council on Insurance. Underwritten by the Massachusetts Mutual Life Insurance Company, the improved program offers enlarged benefits at greatly reduced rates per \$1,000 of coverage.

Large amounts of accidental death benefits are featured in the improved program in addition to the basic life insurance coverage. A maximum life insurance benefit of \$50,000 will be available up to age 60 at rates based upon age categories. Under the old policy, the benefits decreased as the age went up.

Prior to age 60, the new plan will pay a total of \$150,000 for accidental death and a total of \$250,000 if death occurs on a common carrier. In addition, benefits of up to \$150,000 are available in the event of dismemberment or loss of sight.

Full aviation coverage is included, regardless of the number of total hours flown by the pilot.

All OSMA members insured under the old policy have the opportunity of electing to participate in the new program by simply submitting evidence of insurability. Those who choose to do so may keep the old policy without any increase in cost or reduction of benefits.

Under the old policy the annual premium remained \$150 regardless of age, but the life insurance benefit dropped each year from a maximum of \$33,125 at age 25 to a low of \$2,250 at age 69.

The new policy approved by the Council maintains a level life insurance benefit of \$50,000 while the annual premium increases every five or ten years depending on the age of the insured.

For members 30 or under the annual premium is \$100 for the full coverage. Members 30 through 39 pay \$200, 40 through 49 pay \$400,

50 through 54 pay \$700, and 55 through 59 pay \$1,000.

At age 60 the basic amount of life insurance drops to \$25,000, accidental death benefit drops to \$75,000, and benefit for death on a common carrier drops to \$125,000. Premium for this age group is \$800 per year. At age 65 through 69 the basic insurance drops to \$10,000, plus \$30,000 for accidental death and \$50,000 for death on a common carrier. The annual premium rate for this age group is \$500.

All members of the association have been mailed a brochure about the new program. Those interested should contact the OSMA Executive Office in Oklahoma City immediately.

In order for the new plan to become effective, 200 members must enroll. ☐

## Physician Placement

The OSMA Physician Placement Service needs to know the location of practice possibilities in Oklahoma for both generalists and specialists. All association members are urged to report practice opportunities.

Address all information regarding practice opportunities to the OSMA Physician Placement Service, 601 N. W. Expressway, Oklahoma City, Oklahoma 73118.

In particular, the placement service needs specific recommendations regarding placement of specialists. Information for location of general practitioners is also requested.

When writing the Physician Placement Service, please specify the type of doctor needed and give some general information about the practice opportunity.

Throughout the year the association receives a number of inquiries from physicians seeking new places to practice. The information requested above will enable the association to match up the opportunity with the inquiring physician. ☐

## 33rd Governmental Session To Open

One hundred and forty-seven newly elected, re-elected and holdover legislators will arrive at the State Capitol January 5th to attend to affairs of State.

Although voters made major changes in some statewide political offices, little change is reflected in either the House or Senate. Democrats secured one additional seat in each body but held a majority in both before the elections. Biggest change of course was in the Governor's race where Lt. Governor George Nigh received a "working partner." The impact Democrat Governor David Hall will have on future state programs will be determined in a large part by the attitudes of the more seasoned leaders in the Legislature. While the Governor has many reform proposals to initiate, he will be dealing with lawmakers pre-occupied with a legislative reapportionment deadline. Executive Branch programs may well be delayed until district boundaries are established.

Even though census figures indicate the Oklahoma Congressional delegation will remain intact, law requires a re-apportionment after each census. Population shifts may create some problems in arriving at the new districts particularly in the southeastern part of the state. If the legislative load gets heavy, this problem may be laid over until the second session.

### Pre-Filing Begins

As is normal in a first session a host of proposals have been pre-filed for legislative action. Most of these are the result of interim committees and cover a variety of subjects. Drug legislation received the most attention during the interim and a voluminous bill is in the final stages of drafting. The proposed act follows closely the Administration bill passed in Congress and recently signed by



the President. Major features of the measure include: A generic listing of drugs and substances determined to be potentially abused, penalties for the abuses have been lessened in some cases and strengthened for the pusher. The bill has strong law enforcement provisions including the controversial "No Knock" feature.

#### Other Medical Bills

Only a few bills directly affecting medicine have been introduced. An amendment to the "Good Samaritan Act" would extend immunity from lawsuit to a physician rendering emergency care at any location. Adverse language has been added that makes the outcome of the bill speculative.

One proposal would combine control of licensing boards for all professions and occupations under an

appointed director. The State Board of Medical Examiners would be included and the board would be reduced to three physicians and two "representatives of the general public."

State standards for ambulance drivers is the subject of another bill. At present requirements are established at local levels. This legislation has been proposed before and usually receives strong opposition from funeral home operators and directors.

The Oklahoma Medical Education Loan and Scholarship Fund created by law last year will require an additional \$50,000 appropriation this session. The fund finances medical students agreeing to practice in rural areas of Oklahoma.

OSMA's Legislative Committee will review and take positions on these and other medical bills sure to be introduced. □

## Drug Abuse Seminar Set For Enid

Enid is to be the site of the first of a series of six seminars on the subject of drug abuse. Scheduled for January 14th, the seminar will concentrate on the care and treatment of the drug abusing patient.

Sponsored by the OSMA's Committee on Alcoholism and Drug Abuse, a special subcommittee is preparing the actual program for the seminar. The subcommittee consists of Frank Adelman, M.D., Enid psychiatrist; Jim Earls, M.D., and Tom Donica, M.D., both in the private practice of psychiatry in Oklahoma City; and Al Paredes, M.D., a nationally recognized researcher at the OU Medical Center.

The first action of the subcommittee was to prepare a first aid manual on drug abuse. Just prior to the January 14th meeting, copies of the manual will be sent to all physicians in the Northwest part of the state. Other state physicians will be mailed copies shortly thereafter.

Future seminars are being scheduled for the Lake Texhoma area, Tulsa, Altus, Lake Eufaula, and Oklahoma City. Exact dates and the conference locations will be announced later.

The Enid meeting will be held in the Holiday Inn starting about 6:00 p.m. on Thursday evening, January 14th. Dinner will be served and it will be necessary to charge a registration fee to cover the cost of the meal and the material presented. □

## Alumni Honors Doctor Dennis



Caricature by Jim Lange, Daily Oklahoman editorial cartoonist, is presented James L. Dennis, M.D., left, by Elmer Ridgeway, Jr., M.D., Oklahoma City, new president of the Alumni Association of the University of Oklahoma School of Medicine, and Adolph N. Vammen, M.D., Tulsa, right, outgoing president. The presentation heralding the alumni association's commissioning of a portrait of Doctor Dennis came at the annual banquet October 25th. The dinner was planned as a tribute to the former dean and executive vice-president for Medical Center affairs, now vice-president for the health sciences at the University of Arkansas Medical Center. Mrs. Vammen is seated at right. Other new alumni officers are Robert E. Engles, M.D., Durant, vice-president; John M. Moore, M.D., Pauls Valley, secretary; and Donald Brawner, M.D., Tulsa, treasurer. □

## Alabama Physicians Join Union

An Alabama union official has reported that eleven physicians at the Veterans Hospital in Montgomery have joined the American Federation of Government Employees.

The Associated Press reported one doctor as saying that this was the first time that physicians had joined a union as a group. The doctor said that the move had been approved by the local and state Veterans groups and that the move would result in better hospital care for veterans. □





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## Oklahoma's Carlock President-Elect of Southern Medical

J. Hoyle Carlock, M.D., Ardmore, Oklahoma, was elected President-Elect of the Southern Medical Association during its recent annual meeting held in Dallas, Texas.

Serving as President of the Association for 1970-71, is Albert C. Esposito, M.D., well-known ophthalmologist of Huntington, West Virginia. Edgar Boling, M.D., Atlanta, Georgia, was elected First Vice-President, and L. S. Thompson, Jr., M.D., Dallas, Texas, is Second Vice-President.

Born in Ardmore, Doctor Carlock received his undergraduate training at Kemper Military School, his A.B. degree from the University of Oklahoma in 1931, and his M.D. degree from Tulane University School of Medicine in 1935. After interning at Charity Hospital, New Orleans, Louisiana and Cincinnati General Hos-



J. HOYLE CARLOCK, M.D.

pital, Ohio, he served his residency at Scott and White Clinic, Temple, Texas. Doctor Carlock pursued additional studies at the Rotunda Hospital, Dublin, Ireland; American Hospital,

Paris, France; and the American University, Vienna, Austria.

Doctor Carlock's memberships in professional organizations include the American Medical Association; Oklahoma State Medical Association (President 1962-63); and the Tri-Counties Medical Society, of which he was President for two years.

A member of the Southern Medical Association since 1956, Doctor Carlock served as Associate Councilor from Oklahoma, 1958-63, and Councilor, 1963-68; Member of the Executive Committee of the Council, 1963-68, 1969-70; Vice-Chairman of the Council, 1966-67; Chairman of the Council, 1967-68; and First Vice-President, 1969-70.

Among his civic activities, Doctor Carlock holds membership in the Ardmore Chamber of Commerce, Ardmore City School Board, Oklahoma Development Council, and the Oklahoma Medical Research Foundation. Married to the former Ruth Small of Ardmore, their three children are John Hoyle, III, Carol Jean, and Thomas Robert. □

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## Doctors Needed For Legislative Session

On January 5th, the 33rd Oklahoma Legislature will convene. During the session the OSMA will again sponsor the "Doctor of the Day" program.

Marking its sixth year of operation, the program provides a licensed medical doctor to be on call at the State Capitol Building during the time the House of Representatives and the State Senate are in session. A fully equipped first-aid station, located between the chambers of the two legislative bodies, is provided.

In cooperation with the Oklahoma State Nurses Association, a registered nurse is also on duty each day to assist the doctor.

R. Barton Carl, M.D., Chairman of OSMA's Legislative Committee, has requested that all interested physicians contact Mr. Ed Kelsay, Associate Executive Director of the OSMA, to volunteer for the project.

One of the unusual features of the program is that the "Doctor of the Day" is one of the few persons allowed on the chamber floor while the House and Senate are in session. This "privilege of the floor" is granted to very few persons.

Equipment and supplies for the first aid station are donated by pharmaceutical manufacturers and surgical supply houses. Special contributions were made by Connie's Prescription Shops, Melton & Company, Oklahoma Physicians Supply, Mid-Continent Surgical Supply Company, and Midwest Surgical Supply Company, Inc., all of Oklahoma City.

During past legislative sessions, each "Doctor of the Day" was awarded a special citation of merit by the Oklahoma House of Representatives and was introduced at the opening of each House and Senate Session.

In a letter to all OSMA officers, Doctor Carl described the "Doctor of the Day" program as one of the association's most important public relations and legislative liaison activities. □



## Hugh Evans Receives OSMA Life Membership

Hugh J. Evans, M.D., (left), veteran Tulsa ophthalmologist and otolaryngologist, receives a Certificate of Life Membership in the Oklahoma State Medical Association from Doctor Lucien M. Pascucci, M.D., of Tulsa (right), OSMA President-Elect. The presentation was made at the Tulsa County Medical Society meeting of November 9th.

A graduate of Northwestern University School of Medicine, Doctor Evans entered practice in Tulsa in 1925. He closed his offices last year to join the staff of the Tulsa Red Cross Regional Blood Center. □

## DEATHS

JOHN P. COLMORE, M.D.  
1921-1970

Interim Executive Vice-President for OU Medical Center affairs, John P. Colmore, M.D., died November 26th, 1970. The 49-year-old physician was appointed to this position on September 15th by the OU Board of Regents, succeeding James L. Dennis, M.D.

Born in Sewanee, Tennessee, Doctor Colmore received his medical degree from Columbia University College of Physicians and Surgeons in 1946.

Doctor Colmore came to the OU Medical Center in 1952 as one of the first full-time members of the Department of Medicine and as director of the Outpatient Clinics at University Hospital. Known nationally for work in clinical pharmacology and the development of careful and precise testing procedures, Doctor Colmore was Vice-President of the American Society of Clinical Pharmacology and Therapeutics and Chairman of its Section on Clinical Trials. For nine years, he headed the medical center's Clinical Pharmacology Division, formerly known as the Experimental Therapeutics Unit. He held the academic title of full professor with appointments both in the Department of Medicine and Department of Pharmacology.

Last February he was appointed associate dean for research development in the school of medicine, serving in that capacity until his latest appointment on September 15th.

Doctor Colmore was a member of the Phi Beta Kappa, Sigma Xi, the American Association for the Advancement of Science, the



New York Academy of Science, the American Federation for Clinical Research and many other professional and honorary organizations.

W. A. HOWARD, M.D.  
1883-1970

Former OSMA President, W. A. Howard, M.D., died November 27th, 1970. Born in Henton, Illinois, Doctor Howard received his medical degree from St. Louis College of Physicians and Surgeons in 1907.

After establishing his practice in Chelsea, Oklahoma, he became active in both medical and civic affairs. He served his county medical society as President; the OSMA as President in 1939-40; and as Delegate to the American Medical Association from 1940-44. Doctor Howard was a member of the Chelsea City Council for six years and served as Mayor of Chelsea for two terms.

In 1957, the OSMA honored Doctor Howard with the presentation of a Fifty-Year Pin in recognition of over fifty years of active medical practice.

JAMES F. RENEGAR, M.D.  
1873-1970

A 97-year-old, pioneer Grady County physician, James F. Renegar, M.D., died in Chickasha, October 29th, 1970. Born in Normandy, Tennessee in 1873, Doctor Renegar received his medical degree from the University of Louisville School of Medicine in 1906. In 1919, he moved to Tuttle, Oklahoma, where he was in general practice until his retirement in 1967.

In 1950, the OSMA honored Doctor Renegar with the presentation of a Life Membership in recognition of his long years of dedication to the medical profession.

FRANKLIN P. ROBINSON, M.D.  
1889-1970

An 81-year-old Pond Creek physician, Franklin P. Robinson, M.D., died in Enid on October 23rd, 1970. A native of Kansas, Doctor Robinson graduated from the University of Oklahoma School of Medicine in 1914. He had practiced medicine for 56 years, 49 of which were spent in Grant and Garfield counties.

In 1965 the Oklahoma State Medical Association honored Doctor Robinson with the presentation of a Life Certificate in recognition of his completion of 50 years of medical practice. □

## Ethics of Drug Dispensing Discussed

Ethical considerations involved in the dispensing of medications by physicians was discussed in a recent meeting between the OSMA Committee on Drug Abuse and Representatives from the Oklahoma Pharmaceutical Association and the Oklahoma Board of Pharmacy. The meeting resulted in a recommendation that the following material on ethics be published in *The Journal* and in an upcoming issue of the OSMA News.

During the meeting it became apparent that many members of the

association are not familiar with the opinions of the AMA Judicial Council regarding the dispensing of drugs. The Council is charged with the responsibility of interpreting the ten sections of the Principles of Medical Ethics.

Section 7 of the principles states, "In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. . . . drugs, remedies or appliances may be dispensed or supplied by the physician provided it is *in the best interest of the patient.*"

This latter phrase was interpreted

by the Judicial Council in an opinion which stated, "Section 7 of the Principles of Medical Ethics provides: 'drugs, remedies or appliances may be dispensed or supplied by the physician provided that it is in the best interest of the patient.' Under this language it *cannot be considered unethical for a physician to own or operate a pharmacy* provided that there is no exploitation of his patient . . . in essence this language means that a physician in the exercise of sound discretion may dispense 'in the best interest of his patient'; *it does not authorize him to dispense solely for his convenience or for the purpose of supplementing his income.*"

In another instance the Council stated, "although there are circumstances in which physicians may ethically engage in the dispensing of drugs, the American Medical Association nevertheless urges physicians to *avoid the regular dispensing and the retail sale of drugs to patients whenever the drug needs of patients can be met adequately by a local ethical pharmacy.*"

In other opinions, the Judicial Council has made the following points:

—Physicians should recognize pharmacy as a profession.

—It is unethical for physicians to use prescription blanks with the name of a pharmacy printed upon them.

—A patient is entitled to a copy of his or her prescription and he has the privilege of having it filled wherever he wishes.

—It is unethical to issue prescriptions in code.

—Prescriptions for or the dispensing of *secret* medicines or remedies is unethical.

—The Council looks with *disfavor* upon the use of direct telephone lines between a physician and a pharmacist on the theory that a patient is entitled to a written prescription which he can take to the pharmacist of his choice.

—It is unethical for a physician to have a financial interest in a drug repackaging company.

—It is unethical for a physician to own stock in a pharmaceutical company *which he can control or does control while actively engaged in the practice of medicine.* □



## Editor Named To National Advisory Committee

Mark R. Johnson, M.D., Editor-in-Chief of *The Journal*, has been named to the Advisory Committee of the State Medical Journal Advertising Bureau, Inc., the agency which handles national advertising for the OSMA publication.

Doctor Johnson's selection to the group came at a meeting in Boston in late November. He will serve a five-year term, effective January 1st, 1971.

Doctor Johnson accepted the editorship of *The Journal* in October, 1968, filling the unexpired term of the late Ben H. Nicholson, M.D. He was re-elected to the post for a full three-year term in May, 1970. □

## Back PDR Issues Sought By Defense Attorney

Defense attorneys for the OSMA's approved professional liability program are seeking back issues of Physician's Desk Reference (PDR). The books will be used to aid in the preparation of a defense for physicians involved in malpractice litigation.

Anyone wishing to donate a back issue of PDR should send the book date to the OSMA, Attention Ed Kelsay, Associate Executive Director, 601 N. W. Expressway, Oklahoma City, Oklahoma 73118.

If the book is one needed to complete the association's PDR library, you will be contacted and asked to send it to Oklahoma City.

*Please, do not send the book to the OSMA unless you are contacted and requested to do so.* □

## Chest Physicians Honor Hammarsten

James F. Hammarsten, M.D., Professor and Head of the Department of Medicine at the University of Oklahoma Medical Center, was honored by the American College of Chest Physicians at its second annual fall assembly October 25th-29th in Los Angeles.

Doctor Hammarsten was presented an honorary fellowship in the 9,000-member society during the convocation ceremony. He also presented a

special guest lecture to the 2,000 medical specialists in attendance, speaking on "Clinical Significance of the Antitrypsin Factor Deficiency."

Immediate past president of the American Thoracic Society, Doctor

Hammarsten received further recognition this fall when he was named to a two-year term on the National Advisory Heart and Lung Council of the National Heart and Lung Institute. □

## Miscellaneous Advertisements

**YOUNG, ENERGETIC DOCTOR** needed to associate with general practitioner and surgeon with large varied practice. Near lake, state park and one hour to Oklahoma City. Will meet any terms. Contact R. A. Conley, M.D., Watonga, Oklahoma 405 623-7333, collect.

**EXCELLENT GENERAL PRACTICE OPPORTUNITY** in community which needs several additional physicians. Desire to retire soon. Nearly new clinic for sale or lease; includes laboratory, x-ray, physiotherapy, pharmacy, and necessary space to accommodate two physicians. Contact Russel W. Lewis, M.D., 1901 West Broadway, Sulphur, Oklahoma 73086.

**NORTHWEST TEXAS COMMUNITY** needs general surgeon or general practitioner. 6,000 population with 12,000 drawing population from agricultural area. Fifty miles to Wichita Falls and 70 miles to Fort Worth. New 53-bed general hospital. Contact Bowie Clinic, P.O. Box 681, Bowie, Texas. Call collect 817, 872-1121.

**OUTSTANDING OPPORTUNITY** for one or two physicians in Southwestern Oklahoma. Two GP's or a surgeon and an internist would be ideal. One physician could expect to gross in excess of \$70,000. Ten-room clinic and equipment for sale at reasonable value of \$61,000; eight-room home for sale at \$46,000. Excellent living conditions, schools, churches and future potential. City has JCAH hospital. This opportunity is available in the immediate future. Contact Key L, The Journal, Oklahoma State Medical Association, 601 N.W. Expressway, Oklahoma City 73118.

**RESIDENCIES - PHYSICAL MEDICINE AND REHABILITATION.** (Rehabilitation Medicine) Three-year University residency program new hospital with extensive PM&R department. Comprehensive in- and out-patient services. Basic Stipend: \$8,100-\$9,300. Contact: Arthur E. Grant, M.D., University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78229.

**FOR SALE:** A well-equipped doctor's office including a Castle combined Steralizer-Autoclave, one microscope in excellent condition and many other articles of equipment and many fine and expensive medical books. Contact Stacy C. Thompson, M.D., 301 South Second, Guthrie, Oklahoma 73044.

**GENERAL SURGEON SEEKS** practice opportunity in Oklahoma. Licensed in Pennsylvania and New York, eligible in Oklahoma. Eligible, American Board of Surgery. Desires location with emphasis on surgery, but will do limited general practice. Contact Key S, The Journal, Oklahoma State Medical Association, 601 N.W. Expressway, Oklahoma City, Oklahoma 73118.

**PHYSICIAN, GENERAL or PSYCHIATRIC,** previous experience. Earn \$18,000 and up, with fully furnished house. Modernized State Hospital. Ample opportunities for hunting, shooting, fishing and other recreation. Personal visit welcomed. Send curriculum vitae to Western State Hospital, Fort Supply, Oklahoma 73841. □



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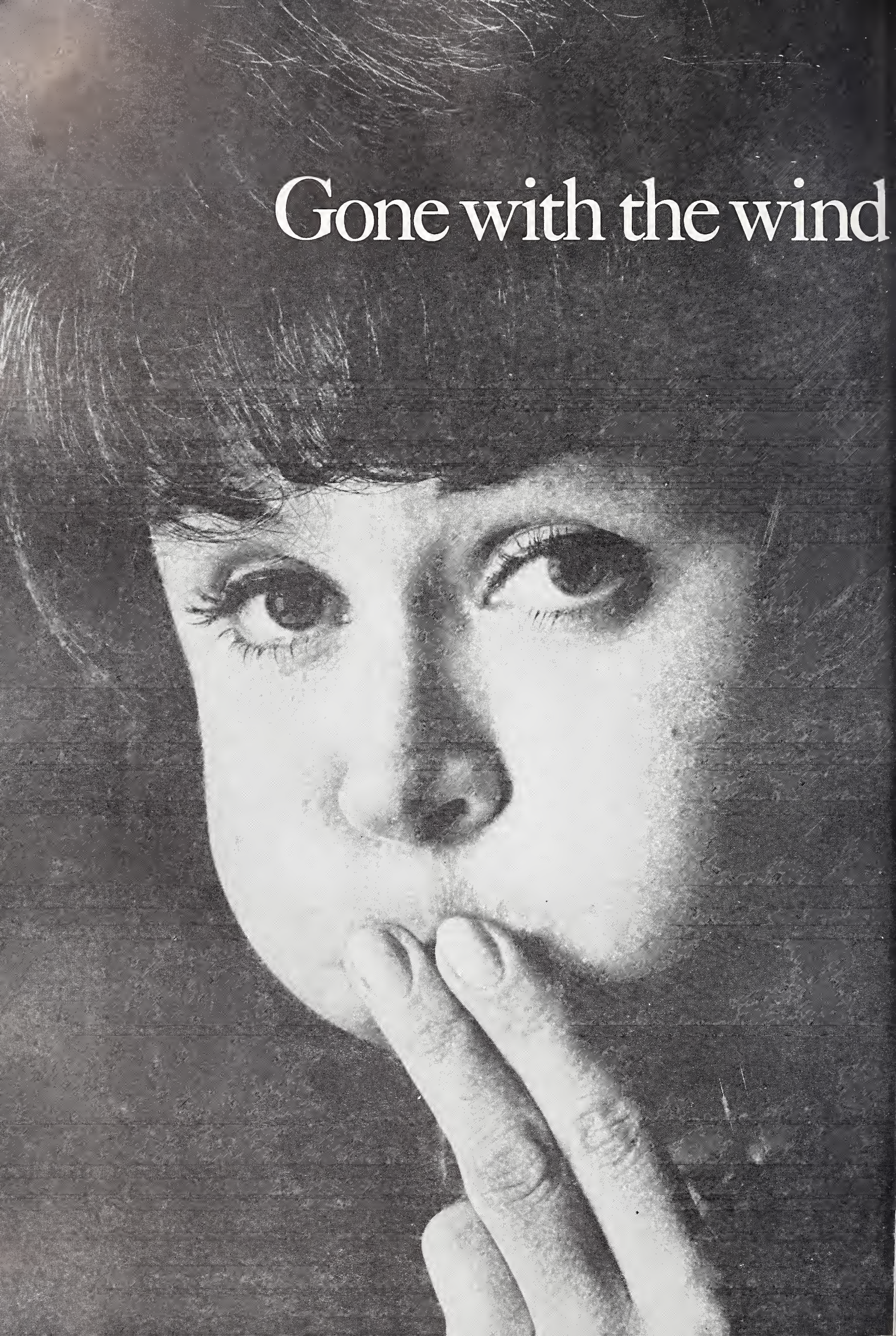
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We emphasize that Garamycin Injectable is approved for use only in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa*, and species of indole-positive and indole-negative *Proteus*, *Escherichia coli*, and *Klebsiella-Aerobacter*.



**Senator Russell Long (D-La.) has jumped on the catastrophic health insurance bandwagon.** In late November, Long announced that he would attempt to attach such a plan to the Social Security Amendments pending before Congress. In making the announcement, he got the jump on the Nixon administration which was in the process of drawing up its own federal catastrophic insurance plan. Long is Chairman of the powerful Senate Finance Committee.

**By 1980 physicians services in the United States will cost \$29 billion—two and one-half times the 1968 figure.** Social Security Administrations statisticians made the prediction in a recent publication. Expenditures for medical care in the U. S. reached \$57 billion in 1968 and probably rose to more than \$63 billion in 1969. Of the \$57 billion, approximately \$11.5 billion went for physicians services in 1968 according to the SSA's office of Research and Statistics.

**A special one-hour television documentary that will enable the American people to see the positive side of medical care throughout the nation is now being filmed by the AMA.** The documentary was approved by the AMA's Board of Trustees last May as a means of increasing public awareness of contributions being made by physicians and others to solve health care delivery problems. The film will cover all types of practice settings and will be made available to television stations early next year.

**Chiropractors won a minor victory before the U. S. Finance Committee** when it was tentatively voted to add chiropractic coverage to Medicare. The amendment was put into the Social Security Amendment bill currently pending before the Senate. The perennial proposal has been accepted several times in the past by the U. S. Senate, but has always been knocked out by the House of Representatives. The House has already ordered a study of the situation involving chiropractic, and probably will not look with favor on the possibility of paying chiropractors before the study is completed.

**Hospital utilization is becoming increasingly important,** and the Social Security Administration is now sending to each of the nation's hospitals a regional profile of utilization patterns designed to help such institutions take a closer look at its own utilization under Medicare. The profiles, called Medicare Analysis of Days of Care (MADOC), will be updated every six months. Although the information is advisory, the implication is obvious that a hospital will be expected to keep a close eye on its utilization pattern as compared with the profiles.

**Family Practice training programs, similar to the one at the University of Oklahoma Medical School, are becoming increasingly popular.** Latest support for this type of training comes from the United States House of Representatives which has passed an assistance program of \$50 million for fiscal year 1971. The purpose of the law is to establish training programs at medical schools and teaching hospitals for the training of medical students to serve as family physicians. Grants to public and non-profit medical schools for construction of appropriate facilities are provided for along with scholarships, fellowships and stipends for needy students. The bill stairsteps up from \$50 million in 1971 to \$75 million in 1972, and \$100 million for each of fiscal 1973, 1974, and 1975.

**The controversial Bennett Amendment** is not expected to pass Congress prior to the pre-Christmas adjournment, and thus will have to be reintroduced when a new session of Congress opens in January. Senator Bennett wants a massive \$100 million a year peer review system for government health care programs. □





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or women of childbearing age, weigh potential benefit against possible hazard.

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